

## **POOR LEGIBILITY**

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BP Legal

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VIA FEDERAL EXPRESS

May 9, 2007

Andrew Taylor  
Case Developer, Mail Stop SFD-7-5  
US Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

**Re: Request for Information Pursuant to Section 104 of CERCLA for the  
Former Amoco Facility in Torrance, California**

Dear Mr. Taylor:

The following is the initial Reponse to the United States Environmental Protection Agency's request for information ("Request") regarding the above-referenced Site pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq., as amended. Your letter dated March 29, 2007 to Robert Malone, Chairman and President of BP America Inc., was received on April 10, 2007.

Your letter pertains to several street addresses along W. 196<sup>th</sup> Street and Normandie Avenues in Los Angeles County, California, that EPA believes were operated by Amoco Inc. To the best of our knowledge, there has been no legal entity by the name of "Amoco Inc." associated with operations at the Site.

We believe the proper legal entity for EPA's inquiry is BP Amoco Chemical Company ("BPACC"), successor to Amoco Chemicals Corporation, Amoco Chemicals Company and Amoco Chemical Company, and therefore it is on behalf o BPACC that the enclosed Response is provided. The legal relationship between BPACC and BP America Inc. is described in the attached Response.

Nothing in BPACC's response to this Request shall constitute an admission of liability for the Site. BPACC and its parent, subsidiary and affiliate corporations reserve the right to contest any allegations made against BPACC or its parents, subsidiaries or affiliates with regard to the Site by any person or entity. By responding to this request for information, BPACC does not waive

Andrew Taylor  
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any applicable privileges, including, but not limited to attorney-client privilege and the attorney work product doctrine.

BPACC objects to the relevant time period for the Request which was not defined. Therefore, the Request is overly broad and imposes an undue burden upon BPACC. BPACC will make every effort to respond with respect to the time period for which it has knowledge, but undertakes only to respond to the Request for the time period covered by its records and/or for the time period for which any persons with knowledge regarding the Site recall any information.

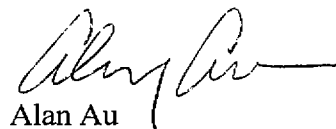
Instructions No. 4 and No. 5 are unduly burdensome to BPACC in that it requires BPACC to seek information from former employees and/or agents who are no longer within the control of BPACC. To the extent that BPACC can identify where particular information not in its possession, custody or control may be obtained, it will do so.

Definition No. 2 is overly broad and unduly burdensome to the extent that it requires BPACC to respond on behalf of its contractors, agents, successors and assigns.

Notwithstanding the above objections, BPACC submits the following responses to the Request. The answers to each separate request are set forth in bold-faced type for ease of reference.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Au", with a long horizontal stroke extending to the right.

Alan Au

AA/DM/tw

Enclosure

cc: Kyle Christie

## **RESPONSES TO ENCLOSURE B QUESTIONS**

Reference herein to "BPACC" refers collectively to the Amoco-related entities consisting of BP Amoco Chemical Company. A description of the corporate relations of the entities is provided in response to Request No. 2. Please see the Response to Request No. 2 for further information.

1. Identify those individuals who provided the knowledge, information or documents used to prepare the response to these questions. Include the full name, current title and duties, as well as past titles and duties, current address and telephone number, and tenure for each individual providing an answer for any of these questions.

### **Response to Question 1:**

<b>Diana Mendoza, Senior Paralegal</b>	<b>Alan Au, Senior Attorney</b>
<b>4101 Winfield Road</b>	<b>4101 Winfield Road</b>
<b>Warrenville, Illinois 60555</b>	<b>Warrenville, Illinois 60555</b>
<b>630-821-2278</b>	<b>630-821-2278</b>
<b>Kyle Christie,</b>	
<b>Environmental Business Manager</b>	
<b>6 Centerpointe Drive</b>	
<b>La Palma, California 90623-1066</b>	
<b>714 670-5303</b>	

**All inquiries regarding the responses to this request should be directed to Mr. Au, counsel for BPACC. This response is based solely on a review of available and relevant records, and Mr. Au has no personal knowledge regarding the information provided herein.**

### **Corporate Status and Relationships**

2. Please provide a brief history of Amoco, Inc.'s ("Amoco") corporate status and structure, including date of incorporation, merger and acquisition history, parent and subsidiary relationships, and predecessor and successor information particularly with regard to BP America, Inc. ("BP"). Please provide any documents supporting this description.

### **Response to Question 2:**

**BPACC was incorporated as Carthage Hydrocol, Inc. on September 12, 1945. On January 19, 1955 Carthage Hydrocol, Inc. changed its name to Hidalgo Chemical Company. On June 25, 1956 Hidalgo Chemical Company changed its name to Amoco Chemicals Corporation. On July 1, 1985 Amoco Chemicals Corporation changed its name to Amoco Chemicals Company. On April 12, 1987 Amoco Chemicals Company change its name to Amoco Chemical Company. On April 12,**



**1999 Amoco Chemical Company changed its name to BP Amoco Chemical Company. On December 31, 2003 BP Amoco Chemical Company merged with BP Chemicals Inc. BP Amoco Chemical Company is the surviving corporation.**

**BP Company North America Inc. owns 100% of the outstanding shares of BP Amoco Chemical Company.**

**BP Corporation North America Inc. owns 100% of the outstanding shares of BP Company North America Inc.**

**BP America Inc. owns 100% of the outstanding shares of BP Corporation North America Inc.**

**BPACC will produce documents pertaining to this Response. (BPACC01467 through BPACC01621.**

3. It is EPA's understanding that American Polystyrene, Inc. ("APC") owns, and/or conducts or has conducted operations at all or portions of the property in the past. Please describe any current or former relationship between Amoco and APC. Please provide the dates and nature of any mergers, acquisitions, acquisition of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and APC and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 3:**

**On March 29, 1993 an Agreement for Sale and Purchase of Assets was entered into by and between Amoco Chemical Company and SMG Industries, Inc. for certain assets in Torrance, California and related rights that are used in the commercial manufacture and sale of polystyrene. SMG Industries, Inc. is n/k/a American Polystyrene Corp.**

**BPACC will produce documents pertaining to this Response. (BPACC00001 through BPACC00235)**

4. It is EPA's understanding that American Chemsolv, Inc. ("American Chemsolv") may have owned or operated, or leased all or portions of the property in the past, and/or land parcels south of the property. Please describe any current or former relationship between Amoco and American Chemsolv. Please provide the dates and nature of any mergers, acquisitions, acquisition of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and American Chemsolv, and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 4:**

**American Chemsolv, Inc. deeded certain property to Brand Plastics Co., in 1962.**

**BPACC will produce documents pertaining to this Response. (BPACC00236 through BPACC00238)**

5. It is EPA's understanding that Mighty Enterprises, Inc. ("Mighty Enterprises") may have owned or operated, or leased all or portions of the property in the past, and/or land parcels south of the property. Please describe any current or former relationship between Amoco and Mighty Enterprises. Please provide the dates and nature of any mergers, acquisitions, acquisition of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and Mighty Enterprises and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 5:**

**BPACC was unable to locate any documents or information describing any current or former relationship between BPACC and Mighty Enterprises. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

6. It is EPA's understanding that PACCAR, Inc., TRICO Industries, Inc., B&W Incorporated, B&W Monarch, and B and W Inc., owned, operated, and/or leased the property immediately south of the property in the past. Please describe any current or former relationship between Amoco and these companies. Please provide the dates and nature of any mergers, acquisitions, assumption of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and each of these companies and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 6:**

**BPACC was unable to locate any documents or information describing any current or former relationship between BPACC and PACCAR, Inc., TRICO Industries, Inc., B&W Incorporated, B&W Monarch, and B and W Inc. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

7. It is EPA's understanding that Ecology Control Industries, Inc., ECI, Inc., and/or Lawson Enterprises owned, operated, and/or leased the property immediately north of the property in the past. Please describe any current or former relationship between Amoco and Ecology Control Industries, Inc., ECI, Inc., and/or Lawson Enterprises. Please provide the dates and nature of any mergers, acquisitions, assumption of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and Ecology Control Industries, Inc., ECI, Inc., and/or

Lawson Enterprises and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 7:**

**BPACC was unable to locate any documents or information describing any current or former relationship between BPACC and Ecology Control Industries, Inc., ECI, Inc., and/or Lawson Enterprises. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

8. Please describe any current or former relationship between Amoco and Shell Oil Company, Inc.; Shell Chemical Company, Inc.; Shell Chemical Corporation; or Shell Union Oil Corporation (collectively "Shell"). Please provide the dates and nature of any mergers, acquisitions, acquisition of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and Shell and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 8:**

**There is no current or past corporate relationship between BPACC and Shell. There may have been certain contractual agreements between Shell and certain entities that operated at the site.**

**BPACC will produce documents pertaining to this Response. (BPACC00239 through BPACC00290)**

9. Please describe any current or former relationship between Amoco and Crossfield Products Corp., including but not limited to Crossfield Products Corp.'s, Dex-O-Tex Division, (collectively, "Crossfield Products"). Please provide the dates and nature of any mergers, acquisitions, acquisitions of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between Amoco and Crossfield Products and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 9:**

**BPACC was unable to locate any documents or information describing any current or former relationship between BPACC and Crossfield Products Corp., including but not limited to Crossfield Products Corp.'s, Dex-O-Tex Division, (collectively, "Crossfield Products"). Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

10. Please describe any current or former relationship between Amoco and "Brand Plastics Company." Please provide the dates and nature of any mergers, acquisitions, acquisitions of assets, or agreements regarding historical or future liabilities. Also include any

contracts, leases or partnerships between Amoco and Brand Plastics Company and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 10:**

**On March 31, 1964 Standard Oil Company, an Indiana Corporation acquired 100% of the issued and outstanding stock of Brand Plastics Company. Stock was transferred to Amoco Chemicals as a contribution capital on September 30, 1965. On June 3, 1969 Brand Plastics Co. merged into Amoco Chemicals Corporation.**

**BPACC will produce documents pertaining to this Response. (BPACC00291 through BPACC00509)**

11. Please describe any current or former relationship between Amoco and SMG Industries, Inc. ("SMG"). Please provide the dates and nature of any mergers, acquisitions, acquisitions of assets, or agreements regarding historical or future liabilities. Also include any contracts, leases or partnerships between APC and SMG and the dates within which these relationships existed. Please provide any documents supporting this description.

**Response to Question 11:**

**On March 29, 1993 an Agreement for Sale and Purchase of Assets was entered into by and between Amoco Chemical Company and SMG Industries, Inc. for certain assets in Torrance, California and related rights that are used in the commercial manufacture and sale of polystyrene.**

**BPACC will produce documents pertaining to this Response. (BPACC00001 through BPACC00235)**

12. Please describe any current and former relationship between Amoco and any other operating entities at the property not mentioned in the questions above, for which you have knowledge, information or documents. Please provide the dates and nature of any mergers, acquisitions, acquisitions of assets, or agreements regarding historical or future liabilities. Please provide any documents supporting this description.

**Response to Question 12:**

**BPACC was unable to locate any documents or information describing any current and former relationship between BPACC and any other operating entities at the property not mentioned in the questions above. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

## **Ownership and Operations at the Property**

13. Please provide the ownership history of the parcels within the property and the operational history during the time Amoco, APC, or other operators for which you have knowledge owned or operated on the property, as well as any previous operational history for which you have knowledge, documents, or information. Please include dates of ownership and parcels owned, description and dates of any transfer of ownership, dates of operation and location of operations on the property, the purpose of operation, and the dates of any change in purpose or operation.

### **Response to Question 13:**

**The American Polystyrene Corporation purchased the land located at 1225 West 196<sup>th</sup> Street, Torrance, California from the Amoco Corporation in 1993. The facility was built in 1964 by the Brand Plastics Company and was set up to manufacture and produce polystyrene from raw styrene materials. This site includes a warehouse and processing plant in the southwest, a maintenance building the in northeast, eight above ground storage tanks in the north, and two large above ground storage tanks in the eastern portion of the site.**

14. Describe the functional operations at the property for Amoco, APC, or other operators for which you have knowledge, prior to and after Amoco's ownership or operations, including specifically what products(s) or intermediate(s) was (were) manufactured, produced, synthesized, treated, modified, or stored; what service(s) was (were) provided; and all operational purposes and activities for which the property and the facilities on the property were used.

### **Response to Question 14:**

**The American Polystyrene Corporation purchased the land located at 1225 West 196<sup>th</sup> Street, Torrance, California from the Amoco Corporation in 1993. The facility was built in 1964 by the Brand Plastics Company and was set up to manufacture and produce polystyrene from raw styrene materials. This site includes a warehouse and processing plant in the southwest, a maintenance building the in northeast, eight above ground storage tanks in the north, and two large above ground storage tanks in the eastern portion of the site.**

15. Please identify the plant or facility manager or managers and the environmental manager or managers at the property for all operators for which you have knowledge, prior to and after Amoco's ownership or operations, including name, current or last know address and telephone number and the dates each person identified held such position. If no person or persons hold or held such titles, please identify as set forth above the person or persons whose duties included management of the facility and management of environmental matters for the facility.

**Response to Question 15:**

**W. T. Kerr, Plant Superintendent**  
**Gene Schmidt, Director of Groundwater Management**  
**Beth Westfall, Environmental Programs Coordinator**  
**Jeff Campbell**  
**Robert Dorr, Environmental Coordinator**  
**Tim Nagengast, Sr. Environmental Specialist**  
**Henry A. McCandless, Plant Manager**

16. Please provide any knowledge, documents or information about the boundaries of the Amoco operations at the property. Please refer to parcels and/or provide a map. If parcels have been subdivided or merged in the intervening years, please note and indicate where this has occurred.

**Response to Question 16:**

**BPACC will produce documents pertaining to this Response. (BPACC00510 through BPACC00511 and BPACC01300 through BPACC01310)**

17. Please describe any relationship between the operation of Amoco at the property, and the operation of TRICO, B&W, Inc., and B and W Incorporation and/or PACCAR on the real property parcels immediately south of the property. Such relationships may include but should not be limited to transfer or sale of chemicals or wastes between the companies or facilities, common use of waste handling and/or chemical storage structures and facilities, common sewer line connections or drainage structures, or shared operations and processing, etc.

**Response to Question 17:**

**BPACC was unable to locate any documents or information describing any current or former relationship with TRICO, B&W, Inc., and B and W Incorporation and/or PACCAR. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

18. Please describe any relationship between the operation of Amoco at the property, and the operation of Ecology Control Industries, Inc., ECI, Inc., and/or Lawson Enterprises on the real property parcels immediately north of the property. Such relationships may include but should not be limited to transfer or sale of chemicals or wastes between the companies or facilities, common use of waste handling and/or chemical storage structures and facilities, common sewer line connections or drainage structures, or shared operations and processing, etc.

**Response to Question 18:**

**BPACC was unable to locate any documents or information describing any current or former relationship with Ecology Control Industries, Inc., ECI, Inc., and/or Lawson Enterprises. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

19. Please provide any knowledge, documents or information related to the *chemical use history and presence of chemicals and hazardous substances* at the property for each of Amoco, APC, or other operators for which you have knowledge, documents or information. This should include but not be limited to all feedstock chemicals, raw materials, chemical intermediates, chemical products, stored chemicals, recycled or reclaimed chemicals, chemicals awaiting recycling or reuse, processing chemicals, or solvents (including but not limited to substances containing or consisting of PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof)<sup>2</sup>.

**Response to Question 19:**

**BPACC will produce documents pertaining to this Response. (BPACC001311 through BPACC01374)**

20. Please describe the quantities of the chemicals used at the property that were provided in response to the last question. Prove the maximum quantities of each chemical present at the property at any point during the operations at the property of Amoco, APC, or other operators for which you have knowledge, documents or information.

**Response to Question 20:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

21. Provide a map depicting the location(s) at the property of all former and current structures which received, held, stored, or enclosed any of the substances listed or discussed in response to the last two questions. Indicate which substances were received, stored, held, or enclosed by each structure<sup>3</sup> at any point in time. Examples of such structures are, but are not limited to, above ground tanks, below ground tanks, open tanks, dip tanks, pipelines, pits, surface impoundments, clarifiers, cesspools, spray booths, trenches, ditches, product or waste recycling or rework units, drums, bins,

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<sup>2</sup> The terms "PCE", "TCE", "DCE", "TCA", and "DCA" are defined under the "Definitions" heading in Closure A to this letter.

<sup>3</sup> Please list the actual chemical constituents if you have this knowledge, information or documents. Note that terms such as "solvents" or "hydrocarbons" are sufficiently specific and not responsive, unless you are declaring that you have no information, knowledge, or documents regarding the specific constituents.

shipping and commercial containers; or other receptacles, equipment or enclosures used during the operation of the facility.

**Response to Question 21:**

**BPACC will produce documents pertaining to this Response. (BPACC0135 through BPACC01376)**

22. Identify the location at the property of any and all **machine shops, vehicle maintenance and degreasing operations** at the property by Amoco, APC or other operators for which you have knowledge, documents or information. For each such location, whether the chemical substances used at the location contained or consisted of PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof).

**Response to Question 22:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

23. If **proprietary or trade-name solvents are provided** in answer to last four questions above, please identify the chemical constituents of each. If documents, knowledge, or information within your possession do not identify all constituents, provide those for which you have knowledge or information, and any supporting documents. Please also indicate for each such solvent whether it contains or consists of PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof) and which such chemicals each solvent contains.

**Response to Question 23:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

24. Please provide knowledge, documents or information related to the waste streams at the property during the ownership or operations of Amoco, APC, or other operators for which you have knowledge, documents or information. For each waste stream, provide all knowledge, documents or information related to the process that produced it and its chemical content, including but not limited to whether it contains or consists of PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof). Provide



the maximum quantity of waste produced in each waste stream per month during these operations.

**Response to Question 24:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

25. Please describe and provide documents regarding any waste handling and waste disposal at the property by Amoco, APC, or other operators for which you have knowledge, documents or information. Describe the methods of management of these wastes prior to their disposal, recycling, sale or transport. Please describe and provide documents regarding:
- a. How, when and where such waste substances were generated, stored, treated, transported, disposed or otherwise handled by Amoco, APC or other operators for which you have knowledge, documents or information.
  - b. Provide a map depicting the location of all former and current structures which received wastes or hazardous wastes, including but not limited to waste solvents containing or consisting of PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof) and chemical mixtures containing or consisting of these compounds. For each of these, please list the specific chemical constituents that it received or contained at any point in time<sup>4</sup>. Examples of such structures may include, but are not limited to, above ground tanks, below ground tanks, dip tanks, portable or mobile tanks, pipelines and drains, pits, dry wells, disposal drainages/wells, evaporation ponds, wastewater treatment systems, surface impoundments, trenches, ditches, clarifiers, cesspools, product or waste recycling or rework units; other receptacles, equipment or enclosures used during the operation of the facility; drums, sumps, spray booths, leach fields, sewer inlets, storm drain inlets, waste piles, bins, waste piles and landfills.

**Response to Question 25 a and b:**

**BPACC will produce documents pertaining to this Response. (BPACC01377 through, BPACC001381)**

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<sup>4</sup> Please list the actual chemical constituents if you have this knowledge, information or documents. Note that terms such as "solvents" or "hydrocarbons" are insufficiently specific and not responsive, unless you are declaring that you have no information, knowledge or documents regarding the specific constituents.

26. In supplementation of your response to the last question, if there were any dry wells or drainage/disposal structures at the property during operations or activities by Amoco, APC, or other operators for which you have knowledge, or documents, please provide:
- a.. The date that the well was installed and the date(s) within which it received hazardous substances or wastes;
  - b. The total depth of the dry well or drainage/disposal structure;
  - c. What materials were used to backfill the well borehole, (e.g. sand, gravel, bentonite, clay, cement, etc.) when it was constructed, if any, as well as any time after it was constructed;
  - d. Whether any dry well contained a casing and if so, at which depth intervals under the ground a casing is present;
  - e. The construction material of which any casing was composed (e.g. stainless steel or PVC);
  - f. How the dry well or drainage/disposal structure was used during operation of the facilities at the property;
  - g. Whether the dry well or drainage/disposal structure had been destroyed and if so, the date it was destroyed, and the procedures used in the destruction/abandonment of the well.
  - h. For each dry well and drainage/disposal structure you identified, please indicate whether it received a water in addition to waste streams, and whether boiling water was ever placed into the dry well or structure during the operations of Amoco, APC, or any other operators for which you have knowledge, information or documents.

**Response to Question 26 a through h:**

**BPACC was unable to locate any documents or information describing dry wells or drainage/disposal structures at the property during operations or activities by BPACC or other operators. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

27. Please describe and provide documents regarding any releases of hazardous substances at the property by Amoco, APC or other operators for which you have knowledge, documents or information. Please describe and provide documents regarding:
- a. When, where and how each such release occurred;
  - b. The amount of each hazardous substance released, and the area and volume of impacted soil.

- c. Any and all activities undertaken in response to each such release or threatened release, including the notification of any governmental agencies about the release.

**Response to Question 27 a through c:**

**BPACC will produce documents pertaining to this Response. (BPACC001382 through BPACC001455)**

28. Describe and provide permits and documents regarding any permits issued under State, local, or Federal environmental laws for operators on the property including, but not limited to waste or wastewater discharge permits, National Pollutant Discharge Elimination System (NPDES) permits, pretreatment permits; air, water, fire department, or hazardous material storage permits; or pursuant to the Resource Conservation and Recovery Act (RCRA). Supply any and all identification numbers supplied by local governments, the State of California, the EPA or any other governmental agency related to the handling, treatment, storage, or disposal of hazardous wastes on the property. Provide all RCRA Identification Numbers issued to you by EPA, a State, or local government, for your operations related to the property.

**Response to Question 28:**

**BPACC will produce documents pertaining to this Response. (BPACC01456 through BPACC01463)**

**Previous Environmental Sampling**

29. Please provide knowledge, documents or information which provide data and results of any and all samples collected at the property, including soil, soil gas, air, or groundwater samples; field screening data; immunoassay results; waste characterization samples; waste discharge/permit compliance samples, or samples for environmental investigations whether private or required by a regulatory agency. Please provide knowledge, documents or information showing sample locations and results; and any reports presenting, interpreting, and/or discussing such results. Also include knowledge, documents or information regarding any boring logs, geological reports, well logs, and well locations. Finally, include any photographs of sampling, excavations or other activities related to soil management at the property.

**Response to Question 29:**

**BPACC will produce documents pertaining to this Response. (BPACC00512 through BPACC01299)**

30. Please identify all contractors or consultants used in any sampling or evaluation of contamination at the property including such contractors' contact information.

**Response to Question 30:**

- SECOR
- ENSR Consulting and Engineering, 19782 MacArthur Boulevard, Suite 365, Irvine, California
- Simon Hydro-Search

31. Please identify (and list in chronological order) any and **all cleanup and maintenance activities associated with structures** which have handled hazardous substances at the property, performed by or paid for by Amoco, APC or other operators for which you have knowledge, documents or information. This should include but not be limited to any soil excavations, soil treatments, tank removals, drum removals and **spill cleanups**. For each activity, provide date and nature of the activity, and describe the location, affected soil or debris volume, sampling locations and results, chemical contaminants targeted by the action, soil or debris location(s) and conditions, and how, when and where such soils or debris were treated, transported, disposed or otherwise handled by Amoco, APC or other operators for which you have knowledge, documents or information. Include information describing any soil that was maintained in piles, bins, trucks, or in another unconsolidated form.

**Response to Question 31:**

**BPACC was unable to locate any documents or information describing all cleanup and maintenance activities associated with structures. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

32. Please provide the **names and addresses of all persons** or companies, including your own if applicable, **which transported soil and/or debris on**, to, or from the property for treatment, disposal, or storage of chemical substances or wastes.

**Response to Question 32:**

**Los Robles Cement Plant owned by the Systech Corporation.  
General Portland/Systech facility in Lebec, California.**

33. Please fully describe any demolition or improvements that occurred while you had an interest in the property, and the deposition of debris from such activities.

**Response to Question 33:**

**BPACC was unable to locate any documents or information describing any demolition or improvements. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response**

34. Please provide copies of any documents you have pertaining to the treatment or disposal of soils excavated from the property (e.g., invoices, contracts, correspondence and financial records), including the processing, storing, treating, disposing or handling of hazardous substances or materials at the property.

**Response to Question 34:**

**BPACC was unable to locate any documents pertaining to the treatment or disposal of soils excavated from the property. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

35. Please provide knowledge, documents or information describing the topography, store water flow, drainage, and/or runoff on the property and any changes to the *aforementioned description while you owned and/or operated a facility on the property.*

**Response to Question 35:**

**BPACC will produce documents pertaining to this Response. (BPACC010464 through BPACC01466).**

36. Did Amoco, APC, or other operators for which you have knowledge, documents or information ever receive a transfer from the Shell Synthetic Rubber Plant<sup>5</sup> (regardless of whether there was an associated monetary transaction in relation to such transfer) of hazardous substances or mixtures containing or consisting of hazardous substances, including but not limited to PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof)? If so, please describe the reason and nature of this transfer. If any such substances were received for chemical storage, chemical recycling, or as a staging or loading area for disposal, please so-indicate and identify the dates within which this occurred. Provide all documents related to such transfers, including but not limited to shipping and hazardous waste manifests, invoices, purchase orders, and accounting documents.

**Response to Question 36:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

37. Did you, APC or other operators for which you have knowledge, documents or information ever transfer to the Shell Synthetic Rubber Plant (regardless of whether there

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<sup>5</sup> The Shell Synthetic Rubber Plant operated between 1942 and 1972 and was bounded by 190<sup>th</sup> Street on the north, Vermont Street on the east, Del Amo Boulevard on the south, and a north-south line running through the east boundary of the property, parallel and east of Normandie Avenue.

was an associated monetary transaction in relation to such transfer) hazardous substances or mixtures containing or consisting of hazardous substances, including but not limited to PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof)? If so, please describe the reason and nature of this transaction, and identify any and all chemical constituents in the materials transferred. If any such substances were received for chemical storage, chemical recycling, or as a staging or loading area for disposal, please so-indicate and identify the dates within which this occurred. Provide all documents related to such transfers, including but not limited to shipping and hazardous waste manifests, invoices, purchase orders, and accounting documents.

**Response to Question 37:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

38. Did you, APC or other operators for which you have knowledge, documents or information ever receive a transfer from the McDonnell Douglas Plant<sup>6</sup> (regardless of whether there was an associated monetary transaction in relation to such transfer) of hazardous substances or mixtures containing or consisting of hazardous substances, including but not limited to PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof)? If so, please describe the reason and nature of this transaction, and identify any and all chemical constituents in the materials transferred. If any such substances were received for chemical storage, chemical recycling, or as a staging or loading area for disposal, please so-indicate and identify the dates within which this occurred. Provide all documents related to such transfers, including but not limited to shipping hazardous waste manifests, invoices, purchase orders, and accounting documents.

**Response to Question 38:**

**BPACC was unable to locate any documents or information response to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

39. Did you, APC, or other operators for which you have knowledge, documents or information ever transfer to the McDonnell Douglas Plant (regardless of whether there was an associated monetary transaction in relation to such transfer) hazardous substances or mixtures containing or consisting of hazardous substances, including but not limited to

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<sup>6</sup> The former McDonnell Douglas plant, later purchased by Boeing Corporation, lay just west of Normandie Avenue, directly across Normandie from the property, and between 190<sup>th</sup> Street and Francisco Street. It manufactured, primarily, aircraft parts.

PCE, TCE, DCE, TCA, DCA, vinyl chloride, methylene chloride, methyl ethyl ketone, acetone, or other ketones; benzol, petroleum spirits, xylene, toluene, benzene, ethylbenzene, chlorobenzene, or naphthalene (or any chemical isomers thereof)? If so, please describe the reason and nature of this transfer, and identify any and all chemical constituents in the materials transferred. If any such substances were received for chemical storage, chemical recycling, or as a staging or loading area for disposal, please so-indicate and identify the dates within which this occurred. Provide all documents related to such transfers, including but not limited to shipping hazardous waste manifests, invoices, purchase orders, and accounting documents.

**Response to Question 39:**

**BPACC was unable to locate any documents or information responsive to this Request. Should additional information become available in the future, BPACC reserves its right to supplement or amend the Response.**

AGREEMENT FOR

SALE AND

PURCHASE

OF

ASSETS

by and between

AMOCO CHEMICAL COMPANY

and

SMG INDUSTRIES, INC.

TOC

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BPACC00001



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AGREEMENT FOR SALE AND  
PURCHASE OF ASSETS

This Agreement for Sale and Purchase of Assets is executed this 29<sup>th</sup> day of March, 1993, by and between AMOCO CHEMICAL COMPANY, a Delaware corporation having its principal office at 200 East Randolph Drive, Chicago, Illinois, hereinafter referred to as "Amoco", and SMG INDUSTRIES, INC., a California corporation having its principal office at 3061 Maria Street, Rancho Dominguez, California, hereinafter referred to as "Buyer".

W I T N E S S E T H:

WHEREAS, Amoco owns certain assets in Torrance, California and related rights that are used in the commercial manufacture and sale of polystyrene;

WHEREAS, Amoco desires to sell and transfer to Buyer certain of the foregoing assets and rights upon the terms and conditions set forth in this Agreement;

WHEREAS, Buyer has been given the opportunity to investigate, and has in fact investigated, Amoco's Torrance, California premises, plant, equipment, products, processes, books and records

used in the manufacture and sale of polystyrene (including, without limitation, the environmental condition of the premises) to the extent that Buyer has deemed necessary to buy said assets and rights, and has offered to buy them from Amoco; and

WHEREAS, the parties intend to state in this Agreement the definitive terms and conditions under which a sale and a purchase of such Torrance, California assets and rights shall be made.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter set forth, the parties hereby agree as follows:

#### ARTICLE I. SALE AND PURCHASE OF ASSETS

1.1 Assets to be Transferred. Subject to, and upon the terms and conditions hereof, and upon the basis of the agreements, representations and warranties contained in this Agreement, Amoco shall sell, transfer, assign, convey, set over, and deliver to Buyer, and Buyer shall purchase, acquire and accept from Amoco at the Closing (as such term is defined in Article IX hereof), Amoco's interest in the assets listed and described below. The assets listed and described in this Section 1.1 are hereinafter collectively referred to as the "Assets".

(a) Real Property. Land, buildings, fixtures and improvements located in Torrance, California, all as described on

Schedule 1 attached hereto (hereinafter collectively referred to as the "Real Property").

(b) Equipment. Except as otherwise provided in Section 1.2 below, all fixed assets, machinery and equipment, and spare parts owned by Amoco as of the Closing which are located on the Real Property, including, without limitation, the assets listed in Schedule 2 attached hereto (hereinafter collectively referred to as the "Equipment").

(c) Working Capital. Subject to the security interest in Inventories (as defined below) provided for in the security agreement to be executed and delivered pursuant to Section 4.3(d), "Working Capital" related to the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property, which shall hereinafter mean (i) all the following inventories of tangible goods (including in-transit inventories), which are used in, and directly and solely relate to, the manufacture of polystyrene at the Real Property or sale of polystyrene manufactured at the Real Property, and are owned by Amoco as of the Closing (hereinafter collectively referred to as the "Inventories"): (A) raw materials, (B) work in process, (C) finished goods, (D) packaging supplies, and (E) materials and supplies; (ii) accounts receivable and notes receivable related to the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property, except for accounts receivable referred to in Section 1.2(d); (iii) prepaid rent,



prepaid property taxes, prepaid supplies, advances and other prepaid expenses and deposits related to the manufacture of polystyrene at the Real Property or sale of polystyrene manufactured at the Real Property; and (iv) all accounts payable and other current liabilities related to the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property, which shall be deemed to include amounts for all in-transit Inventories equal to their value pursuant to Section 4.3(a), but excluding any accruals for rebates to customers under contracts for sale of polystyrene, which customers are supplied with polystyrene manufactured at the Real Property. Should any such rebates become due after Closing, Amoco shall pay the portion of such rebates which relates to polystyrene sold by Amoco prior to the Closing, directly to Buyer.

(d) Contracts. Subject to the provisions of Sections 1.2 and 1.5, all of Amoco's rights in, and obligations under, the executory contracts, agreements, leases, licenses, commitments, sales orders, purchase orders, and secrecy agreements, whether oral or written, to which Amoco is a party as of the Closing, and which directly and solely relate to the manufacture of polystyrene at the Real Property or sale of polystyrene manufactured at the Real Property (hereinafter collectively referred to as the "Contracts"), except for those listed on Schedule 3 attached hereto.

(e) Licenses and Permits. Subject to the provisions of Section 1.5, all of Amoco's rights in, and obligations under, the

government licenses, permits, certificates and approvals which are issued to Amoco and are used in, and directly and solely relate to, the manufacture of polystyrene at the Real Property or sale of polystyrene manufactured at the Real Property, as of the Closing (hereinafter collectively referred to as the "Permits"), except for those Permits identified on Schedule 4 attached hereto.

1.2 Excluded Assets. The following rights, properties and assets (hereinafter collectively referred to as the "Excluded Assets") are not included in the Assets:

(a) Other Amoco Assets. Except as otherwise expressly provided herein: (i) all rights, properties and assets owned by Amoco which are not located at the Real Property, regardless of whether such assets are used in the manufacture or sale of polystyrene; (ii) all rights, properties and assets owned by Amoco, wherever located, which are not used in, or do not directly and solely relate to, the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property; and (iii) the mainframe computer modem used at the Real Property.

(b) Unassignable Assets. All assets, properties, rights and information of Amoco that are not freely assignable by Amoco to Buyer, or that Amoco and Buyer may prior to Closing agree in writing to exclude from the sale.

(c) Trademarks and Trade Names. Subject to Section 3.1 below, all rights Amoco may have in the Amoco name and the Amoco Torch and Oval trademark and all trademarks and trade names owned by Amoco and the goodwill associated with such trademarks and trade names.

(d) Accounts Receivable. All accounts receivable (hereinafter collectively referred to as the "Accounts Receivable") relating to sales by Amoco, prior to the Closing Date, of polystyrene manufactured at the Real Property.

(e) Cash. Funds on hand, funds in bank accounts (including lock boxes), securities, receivables from Amoco intercompany accounts, reserves, funds, and similar cash and cash equivalent assets, wherever located and regardless of whether used in, or directly and solely relating to, the manufacture of polystyrene at the Real Property or sale of polystyrene manufactured at the Real Property.

(f) Other Assets. All rights, properties and assets of Amoco not directly and solely related to the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property and not covered by Section 1.1 above, and all insurance policies and all rights thereunder.

1.3 Transfer of Title to the Real Property.

(a) At the Closing, Amoco shall convey to Buyer subject to the liens and encumbrances listed in Schedule 5 attached hereto, Amoco's interest in the Real Property, by a special warranty deed in the form attached as Exhibit A hereto, which will include the covenants, restrictions, and reservations set forth in Section

1.3(b) below. Seller shall provide a survey reasonably required by a title company to issue an owner's title policy, and pay the costs therefor. Buyer shall pay all title insurance costs (including the costs of Amoco's preliminary title report provided by Chicago Title & Trust Company) in connection with the conveyance of the Real Property, as well as all costs of recording the deed and any other taxes or fees imposed by any state or local jurisdiction on the sale, conveyance, transfer or assignment of the Real Property.

(b) The conveyance of the Real Property is subject to:

- (i) all easements, covenants, conditions, assignments, restrictions, and reservations of record;
- (ii) all building, zoning, and other applicable ordinances and regulations of any municipal, county, state or federal authority having jurisdiction on the property;
- (iii) the lien for real property taxes for the year in which conveyance occurs; and
- (iv) all encroachments, overlaps, and other matters which would be disclosed by an accurate current survey;
- (v) minor title defects or liens consisting of minor survey exceptions and other unrecorded easements or rights of way or other restrictions as to the use of the Real Property provided the same does not render title unmarketable;
- (vi) the rights of parties in possession not disclosed by public record;
- (vii) such facts as would be revealed by an inspection of the Real Property; and
- (viii) the general or standard printed exceptions and exclusions usually contained in commitments for title insurance (items (i) through (viii) above collectively referred to hereinafter as "Permitted Exceptions").

1.4 Transfer of Equipment and Working Capital. At the Closing, Amoco shall convey to Buyer, subject to the liens and encumbrances listed in Schedule 6 attached hereto and subject to the security interest in Inventories provided for in the security agreement to be executed and delivered pursuant to Section 4.3(d), Amoco's interest in the Equipment and the Working Capital by means of a bill of sale in the form attached as Exhibit B hereto.

1.5 Transfer of Contracts, Licenses and Permits.

(a) At the Closing, Amoco shall transfer to Buyer, and Buyer shall accept the rights and obligations of Amoco under, all Contracts and Permits to be transferred in accordance with Section 1.1. This shall be accomplished by Amoco and Buyer each executing and delivering to the other at the Closing an assignment and assumption agreement whereby Amoco assigns and Buyer assumes and agrees to perform all such Contracts and Permits, with said assignment and assumption agreement to be substantially in the form attached hereto as Exhibit C. Buyer shall perform such Contracts and Permits in accordance with the terms thereof and indemnify and hold Amoco harmless, pursuant to Section 10.2 below, from and against any Claim (as such term is defined in Section 5.1) made against Amoco relating to such Contracts and Permits except for Claims for which Amoco is responsible under Section 5.2.

(b) To the extent that any such Contract or Permit, or any other property interest or right included as an Asset to be transferred, is not capable of being assigned, transferred or

subleased without the consent or waiver of the issuer thereof, or the other party thereto, or any third person (including a government or governmental unit), or if such assignment, transfer or sublease or attempted assignment, transfer or sublease would constitute a breach thereof or a violation of any law, decree, order, regulation or other governmental edict or is otherwise not practicable, this Agreement shall not constitute an assignment, transfer or sublease thereof, or an attempted assignment, transfer or sublease thereof.

(c) Amoco is not obligated to transfer to Buyer any of its rights and obligations in and to any of the Contracts or Permits referred to in Section 1.5(b) without Amoco and Buyer first having obtained all necessary consents and waivers. Amoco shall use reasonable efforts for a six (6) month period from the date hereof, and Buyer shall cooperate with Amoco, to obtain the consents and waivers and to resolve the impracticalities of assignment referred to in Section 1.5(b) hereof and to obtain any other consents and waivers necessary for Amoco to convey to Buyer any of such Contracts or Permits as soon as practicable; provided, however, that Amoco shall not be obligated to pay any consideration therefor to the party from whom the consent or waiver is requested.

(d) To the extent that the consents and waivers referred to in Section 1.5(b) hereof are not obtained by Amoco, or until the impracticalities of transfer referred to therein are resolved, Amoco shall, during the six (6) month period commencing with the

Closing or such longer period as Amoco may desire (but, as to any particular Contract or Permit, not longer than the term thereof), use its reasonable efforts, with costs of Amoco related thereto to be promptly reimbursed by Buyer, to (1) provide to Buyer at its request the benefits of any Contract or Permit, all as referred to in Section 1.5(b) hereof, but only to the extent necessary for Buyer's ownership and use of the Assets as owned and used prior to Closing, and (2) cooperate in any reasonable and lawful arrangement designed to provide such benefits to Buyer. After Amoco has fulfilled its obligations set forth in Section 1.5(c) above, Amoco shall have no further obligations hereunder with respect to assignment of such Contracts or Permits and the failure to obtain any necessary consent or waiver with respect thereto shall not be a breach of this Agreement. In no event shall Amoco's obligations under Section 1.5 include any obligation to commence or prosecute litigation against any third party. Buyer agrees to reimburse Amoco promptly for its reasonable costs and expenses incurred in connection with this Section 1.5(d).

(e) To the extent that Buyer is provided the benefits pursuant to Section 1.5 hereof of any Contract or Permit, Buyer shall perform, for the benefit of the issuer thereof or the other party or parties thereto, the obligations of Amoco thereunder or in connection therewith, but only to the extent that (1) such action by Buyer would not result in any default thereunder or in connection therewith, and (2) such obligation would have been assumed by Buyer pursuant to Section 1.1(d) or Section 1.1(e) but

for the nonassignability or nontransferability thereof, and if Buyer shall fail to perform to the extent required herein, Amoco shall cease to be obligated under Section 1.5 hereof in respect of the instrument which is the subject of such failure to perform unless and until such situation is remedied, and Buyer shall indemnify and hold Amoco harmless from and against all losses, costs, and damages incurred by Amoco as a result of Buyer's said failure to perform.

## ARTICLE II. EMPLOYEES AND BENEFITS

2.1 Employee List. Schedule 7 attached hereto is a list of certain employees of Amoco, who are directly engaged in the manufacture of polystyrene at the Real Property. All employees listed on Schedule 7 are hereinafter referred to as the "Employees".

2.2 Offers of Employment. Buyer shall make offers of full-time regular employment as of the Closing to all active Employees at salaries substantially equivalent to those provided by Amoco as of Closing. For purposes of this Agreement, active Employees shall be all Employees other than those Employees who, as of the Closing, have been on disability leave for more than the immediately preceding two (2) years.

2.3 Savings Plan. Buyer shall establish a new Section 401(k) plan (the "New Savings Plan") and all Employees shall be eligible



to participate in the New Savings Plan as of Closing. The New Savings Plan shall provide that Buyer shall match Employee contributions to the New Savings Plan, with a minimum annual matching contribution by Buyer of the lesser of four percent (4%) of an Employee's salary or the Employee's actual contribution during such year.

2.4 Vacation. Buyer shall provide vacation benefits to the Employees that are similar to those provided by Amoco as of Closing. Employees with longer service shall be entitled to a greater amount of vacation, with each Employee entitled to a minimum of two weeks vacation per calendar year.

2.5 Union. Buyer acknowledges that certain of the Employees are represented for purposes of collective bargaining by the International Chemical Workers Union Local No. 1 (hereinafter referred to as the "Union"). Buyer agrees that by undertaking the purchase of the Assets and the hiring of the Employees, it also agrees that it will recognize the Union as of Closing for purposes of collective bargaining for those Employees represented by the Union as of Closing.

2.6 Severance. Buyer shall establish, prior to Closing, a severance program with respect to any Employee whose employment with Buyer is terminated by Buyer within one (1) year after Closing, except for terminations for just cause, that is substantially similar to Amoco's severance program as of Closing (a

terminated Employee shall at minimum receive severance equal to two weeks of the Employee's most recent salary, for each year of service).

2.7 Health Care, Dental, Life Insurance, Long-term Disability. Buyer shall establish, prior to Closing, medical/health care, dental, life insurance and long-term disability plans for the Employees, which plans shall be substantially similar to those provided by Amoco as of Closing. All Employees (and in the case of medical/health care and dental, also dependents of Employees) shall be eligible to participate in such plans as of Closing.

2.8 General. Buyer shall recognize Employees' prior service with Amoco and its affiliates for all purposes, including, without limitation, eligibility, vesting, and benefit determination and accrual, in connection with employee benefits, plans and programs such as vacation, severance, medical/health care, dental, life insurance and long-term disability. Buyer will offer immediate enrollment, without consideration of any pre-existing conditions, in its medical/health care, dental, life insurance and disability benefit plans. Further, to the extent any of the Employees incurs expenses in 1993 under Buyer's medical/health care and dental plans that he or she would not have incurred if he or she had remained covered by the medical/health care and dental plans of Amoco and its affiliates, related to deductibles and stop-loss limits, Buyer

shall reimburse Employees for all such expenses, and Amoco will reimburse Buyer for fifty percent (50%) of all such expenses.

2.9 Benefit Plan Documentation. Prior to Closing, Buyer shall provide to Seller documentation reasonably satisfactory to Seller showing that Buyer will have in effect as of Closing the benefit plans and programs set forth in Sections 2.3, 2.4, 2.6, 2.7 and 2.8.

2.10 WARN Act. Amoco and the Buyer do not anticipate that there will be any employment losses at the manufacturing facility located on the Real Property as a direct consequence of this Agreement that might trigger obligations under the Worker Adjustment and Retraining Notification (WARN) Act, 29 U.S.C. 2102, et seq. Nevertheless, to the extent that any WARN Act obligations might arise at such facility, it is agreed that Amoco shall be responsible for any WARN Act obligations arising prior to the Closing, and Buyer shall be responsible for any WARN Act obligations arising after the Closing.

### ARTICLE III. ANCILLARY TRANSACTIONS

#### 3.1 Use of Trademarks.

At the Closing, Amoco will deliver to Buyer a consent from Amoco Oil Company, in the form attached hereto as Exhibit D, for Buyer to use the "AMOCO" name and the "AMOCO Torch and Oval" design for a period not to exceed ninety (90) days after the

Closing, and for the sole purpose of exhausting those Inventories acquired by Buyer hereunder which bear such name and/or design; the above notwithstanding, during such ninety (90) day period, Buyer agrees to take all practical steps to expeditiously remove or permanently conceal from view the "AMOCO" name and the "AMOCO Torch and Oval" design from all Assets transferred hereunder.

3.2 Technology License. At the Closing, Amoco shall deliver a license agreement executed by Amoco Corporation, which Buyer shall also execute at the Closing, which will grant to Buyer a nonexclusive, royalty-free license under technical information and patent rights owned by Amoco Corporation, solely for use in manufacturing polystyrene at the Real Property; said license agreement to be substantially in the form attached hereto as Exhibit E.

3.3 Styrene Supply Agreement. At the Closing, Amoco and Buyer shall each execute and deliver to the other an agreement pursuant to which Buyer shall purchase styrene from Amoco, with said agreement to be substantially in the form attached hereto as Exhibit F.

3.4 Employee Assignment Agreement. At the Closing, Amoco and Buyer shall each execute and deliver to the other an agreement covering the assignment by Amoco to Buyer, for a period not to exceed fourteen (14) calendar days, of a certain person whose services are requested by Buyer to assist in the transition to

Buyer's operation of the Assets, with said agreement to be substantially in the form attached hereto as Exhibit G.

3.5 Technical Services Agreement. At the Closing, Amoco and Buyer shall each execute and deliver to the other an agreement pursuant to which Amoco shall provide certain technical services to Buyer, for a period not to exceed three (3) months, with said agreement to be substantially in the form attached hereto as Exhibit H.

#### ARTICLE IV. PURCHASE PRICE AND PAYMENT

4.1 Purchase Price. In consideration of the transfer of the Assets as of the Closing and the other undertakings of Amoco hereunder, Buyer shall pay Amoco one million, three hundred and fifty thousand dollars (\$1,350,000.00), plus the Working Capital Value at Closing as determined to exist in accordance with the procedures provided for in Section 4.3 hereof, if such value is positive, or minus such value if it is negative (such resulting total amount referred to herein as the "Purchase Price").

4.2 Payment. At the Closing, Buyer shall deposit one million, three hundred and fifty thousand dollars (\$1,350,000.00) in immediately available funds, by bank wire transfer to an account designated by Amoco for such purpose.

4.3 Working Capital Adjustment.

(a) Within forty-five (45) days after the Closing, Amoco shall provide Buyer with a statement of Working Capital Value at Closing, certified by an officer of Amoco, in accordance with this paragraph. Working Capital (as defined in Section 1.1(c)) as of Closing shall be valued in accordance with the following procedures. The quantity of Inventories (other than in-transit inventories) shall be determined by one complete physical count of such Inventories located on the Real Property to be conducted by Amoco, and observed by Buyer at Buyer's option and expense, in the two (2) day period before Closing. For Inventories in tanks and silos, the physical count will be done by gauging. For Inventories in transit or in rail cars, the physical count will be done by reference to the corresponding weigh bills.

The aggregate value of the quantity of Inventories determined by such physical count plus the value of any in-transit Inventories as of the Closing, shall be determined as follows: (i) raw materials (except for styrene) shall be valued at the price in the most recent invoice received by Amoco for the raw material (at the Real Property) in question; (ii) styrene at the Real Property shall be valued at the low net transaction price as published in the most recent issue, prior to Closing, of the CMAI Monomers Market Report, plus the actual per pound freight incurred by Amoco for styrene shipments to the Real Property in the last full calendar month prior to Closing multiplied by the number of pounds of styrene at the Real Property determined by the physical count, less \$4000;

(iii) styrene in transit shall be valued at the price applicable for the first month under the styrene supply agreement executed and delivered pursuant to Section 3.3, plus the actual per pound freight incurred by Amoco for styrene shipments to the Real Property in the last full calendar month prior to Closing multiplied by the number of pounds of styrene in transit; (iv) packaging supplies and materials and supplies Inventories shall be valued at the actual invoiced costs for said Inventories; and (v) work in process and finished goods Inventories shall be valued at Amoco's fully absorbed cost for such, as follows: (1) the direct variable and fixed manufacturing costs as reflected on Amoco's operating statements for the Torrance plant for the last three (3) full calendar months prior to Closing shall be averaged; (2) such average shall be divided by the average monthly production of finished goods at the Real Property during the same three (3) month period, yielding a cents per pound amount; and (3) the resulting cents per pound amount shall be multiplied by the quantities of work-in-process and finished goods Inventories.

Accounts and notes receivable (except for Accounts Receivable referred to in Section 1.2(d)), prepaid expenses, accounts payable and other current liabilities (including amounts for in-transit Inventories), shall be valued at book value (which in the case of in-transit styrene shall be the value pursuant to Section 4.3(a)(iii)).

The aggregate value of the Inventories so determined, plus the value of such accounts and notes receivable and such prepaid expenses so determined, less such accounts payable and other current liabilities so determined, all as certified by an officer of Amoco, shall be the "Working Capital Value at Closing", provided, however, that in no event may the Working Capital Value at Closing exceed six hundred thousand dollars (\$600,000.00). If as the result of circumstances outside of the usual or ordinary course of business, the Working Capital Value at Closing exceeds \$600,000.00, Amoco shall have the right to take back and keep for itself that amount of finished goods Inventories which, when subtracted from the Working Capital Value at Closing, will result in the Working Capital Value at Closing equalling \$600,000.00. It shall be deemed that Amoco did not transfer its interest in such amount of Inventories to Buyer at the Closing, but retained such interest.

(b) The Working Capital Value at Closing shall be paid, in immediately available funds by bank wire transfer, by Amoco (if such value is negative) or the Buyer (if such value is positive) to the other, as the case may be, within sixty (60) days after the Closing.

(c) Buyer shall have the right to conduct an audit of the books and records of Amoco pertaining to the Working Capital Value at Closing for the purpose of determining the accuracy of same, provided that any audit must be completed and written notice



of contest must be given within three (3) months after Closing or the Working Capital Value at Closing shall be deemed to be conclusive and binding on the parties.

(d) In consideration of the undertakings of Amoco hereunder, Buyer shall execute and deliver to Amoco, at least five (5) business days prior to the Closing, an agreement pursuant to which Buyer shall grant to Amoco a security interest in the Inventories and in all other raw materials, work in process, finished goods, packaging supplies, materials and supplies, and accounts receivables, in which Buyer acquires any interest, whether before or after Closing, in order to secure any payment required by Buyer under Section 4.3(b), with said agreement to be substantially in the form attached hereto as Exhibit I.

#### ARTICLE V. ALLOCATION OF LIABILITIES

5.1 Claims. For purposes of Article V and Article X of this Agreement, the term "Claims" shall mean any and all costs, fees, expenses, claims, damages (including punitive damages), demands, suits, losses, deficiencies, assessments, administrative orders, fines, penalties, causes of action, proceedings, lawsuits, litigation, judgments (including pre- and post-judgment interest), settlement payments, liabilities, obligations, costs of investigation, costs of litigation (including reasonable attorneys' and consultants' fees and expenses) and other ancillary items of

any kind or description (regardless of by whom asserted and regardless of whether based in whole or in part on strict liability, willful or intentional misconduct, ordinary or gross negligence, or otherwise).

5.2 Liabilities of Amoco. Except as otherwise provided in Sections 5.4 and 5.5 below, and subject to points 1), 2) and 3) set forth in Section 10.1, Amoco shall be responsible for Claims that arise out of (i) Amoco's ownership or use of the Assets prior to the Closing, or (ii) polystyrene sold by Amoco prior to the Closing.

5.3 Liabilities of Buyer. Except as otherwise provided in Section 5.5 below, Buyer shall be responsible for Claims that arise out of (i) Buyer's ownership or use of the Assets after the Closing, or (ii) polystyrene sold by Buyer after the Closing.

5.4 Current Liabilities. Buyer shall assume and be responsible for all accounts payable and other current liabilities related to the manufacture of polystyrene at the Real Property or the sale of polystyrene manufactured at the Real Property (including without limitation amounts for all in-transit Inventories equal to their value pursuant to Section 4.3(a)).

5.5 Environmental Liabilities.

(a) As used herein, "Environmental Legislation" shall mean any of the following: the Clean Air Act, 42 U.S.C. 7401 et

seq; the Clean Water Act, 33 U.S.C. 1251 et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.; the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq.; the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.; the Occupational Safety and Health Act, 29 U.S.C. 651 et seq.; the Safe Drinking Water Act, 42 U.S.C. 300f et seq.; and any other similar federal, state or local environmental laws, ordinances, rules or regulations.

(b) The Groundwater Baseline for Real Property, attached hereto as Schedule 8, shall be deemed to be conclusive evidence, as between Amoco and Buyer, of the presence of substances, contaminants or other materials in the groundwater of the Real Property as of Closing. Specifically, the Baseline Levels of substances, contaminants or other materials either set forth in the table on page 3 of Schedule 8 or resulting pursuant to paragraph E on page 4 of Schedule 8, whichever applies (such Baseline Levels hereinafter referred to as the "Groundwater Baseline"), as between Amoco and Buyer, shall be deemed a conclusive statement of which substances, contaminants or other materials are present in the groundwater of the Real Property as of Closing, and the level at which they are present as of Closing. For purposes of the Groundwater Baseline, if the level of any substance, contaminant or other material is indicated as: (i) not detected, or (ii) below the method detection limit; then such substance, contaminant or other material shall be deemed not to be present in the groundwater of the Real Property as of Closing. Further, if a substance,

contaminant or other material was not tested for or if a substance, contaminant or other material is otherwise not contained in the Groundwater Baseline, then such substance, contaminant, or other material shall be deemed not to be present in the groundwater of the Real Property as of Closing. If sampling or testing after Closing outside of Schedule 8 indicates the presence of substances, contaminants or other materials in the groundwater of the Real Property, (i) which are not contained in the Groundwater Baseline, or (ii) at levels in excess of the Groundwater Baseline, it shall be conclusively presumed, as between Amoco and Buyer, in the case of (i), that such substances, contaminants or other materials came into the groundwater of the Real Property after Closing, and in the case of (ii), that such substances, contaminants or other materials came into the groundwater of the Real Property after Closing to the extent of such excess.

(c) With respect to data contained in Schedule 8 as of Closing and excluding any additional data resulting from further groundwater sampling permitted under paragraph E of Schedule 8, Amoco warrants that (i) it used a reputable contractor, experienced in groundwater sampling, to carry out the groundwater sampling; (ii) to the best of its knowledge, groundwater samples obtained from the wells referred to in Schedule 8 were properly collected, consistent with the methods described in Attachment C of Schedule 8; (iii) analyses of the samples were performed at a qualified analytical laboratory; and (iv) the groundwater data was analyzed as described in paragraph D and Attachment B of Schedule 8.

(d) Subject to points 1), 2) and 3) set forth in Section 10.1 below, as between Buyer and Amoco only, Amoco agrees to accept responsibility and liability for, and pursuant to Section 10.1 below, to indemnify Buyer, and its directors, officers and employees, from and against, any and all Claims, whether known or unknown, to the extent the presence of any substances, contaminants or other materials in the groundwater of the Real Property as of Closing as determined by the Groundwater Baseline and Section 5.5(b) above, is sufficient to establish liability under any Environmental Legislation as it exists on the Closing Date.

(e) Buyer has had the opportunity to inspect the Real Property and the other Assets to be transferred hereunder. Buyer agrees to accept all responsibility and liability for, and, pursuant to Section 10.2 below, to indemnify Amoco and its affiliates, and their respective directors, officers and employees, from and against, any and all Claims (regardless of whether based in whole or in part on strict liability, willful or intentional misconduct, or the sole or concurrent negligence, ordinary or gross, of Amoco or its affiliates, or their respective directors, officers or employees), whether known or unknown, arising from or relating to any release, discharge, disposal or emission of, or exposure to, or migration or movement of, hazardous waste, hazardous substances, pollutants, contaminants, materials, products or by-products, into, onto, on, under or from the Real Property (surface, subsurface and groundwater), to the extent Amoco is not responsible for such Claims under Section 5.5(d); provided,

however, if Amoco would have been responsible for (and would have indemnified Buyer from and against) a Claim under Section 5.5(d) but for the fact that Section 5.5(d) is subject to points 1), 2) and 3) set forth in Section 10.1, then Buyer shall not be responsible for (and shall not indemnify Amoco from and against) such a Claim under this Section 5.5(e).

5.6 Access to Real Property after Closing.

(a) For a period of three (3) years after Closing, Buyer shall give Amoco (including its agents and representatives) access to the Real Property, a maximum of two times each year, to, at Amoco's sole option, perform environmental sampling and testing, provided that at least thirty (30) days prior to the date on which any such sampling and testing is proposed to be conducted Amoco shall submit to Buyer for Buyer's approval a detailed description of any proposed sampling and testing to be conducted. Buyer shall respond to such proposed sampling and testing within twenty (20) days of Amoco's submission, and shall not unreasonably withhold approval of such proposed sampling and testing. The results of such sampling and testing shall not become part of Schedule 8 and shall in no event alter either party's responsibility under Section 5.5. If such sampling and testing indicate the presence of substances, contaminants or other materials at levels exceeding the Groundwater Baseline or the presence of substances, contaminants or other materials not present as of Closing, and if the cause of such increased levels or such new substances, contaminants or other materials is Buyer or Buyer's operations or related thereto, then upon notice of such from Amoco, Buyer shall immediately undertake

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whatever actions are reasonably necessary to return the Real Property to its condition as of Closing. In addition, if the cause of such increased levels or such new substances, contaminants or other materials is Buyer or Buyer's operations or related thereto, then Buyer shall immediately cease the activities giving rise to such increased levels or such new substances, contaminants or other materials. Buyer agrees that money damages would not be an adequate remedy for any breach by Buyer of its obligations under this Section 5.6 and that Seller shall be entitled to obtain, in addition to other available rights or remedies at law or in equity, specific performance or injunctive relief as a remedy for any breach by Buyer of its obligations under this Section 5.6.

(b) Amoco shall share with Buyer the results of its sampling and testing under Section 5.6(a). Buyer shall share with Amoco the results of any environmental sampling or testing that it performs relative to the Real Property, whether during or after the three (3) year period referred to in Section 5.6(a).

#### ARTICLE VI. REPRESENTATIONS AND WARRANTIES

6.1 Amoco's Representations and Warranties. Amoco represents, warrants and covenants to and with Buyer, and it shall be a condition of the obligations of Buyer hereunder, that:

(a) Amoco is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and is qualified and in good standing as a foreign corporation in the State of California.

(b) Amoco has and will at Closing have full corporate power and authority to make and perform this Agreement.

(c) The execution, delivery and performance of this Agreement have been duly authorized by all requisite corporate action.

(d) This Agreement constitutes a valid and legally binding obligation of Amoco enforceable in accordance with its terms except as the enforcement thereof may be limited by applicable bankruptcy, insolvency, rearrangement, reorganization or similar debtor relief legislation affecting the rights of creditors generally from time to time in effect and except that specific performance is an equitable remedy and is discretionary.

(e) Neither the execution nor delivery of this Agreement, nor the completion of the sale hereunder will, nor with the lapse of time or the giving of any notice would, result in any breach or default of any liabilities or obligations of Amoco in a way that will restrict or adversely affect in any material respect the ability of Buyer to use the Assets as they are now being used.



(f) Amoco has good and marketable title to the Assets described in Sections 1.1(b) and 1.1(c) free and clear of any mortgages, liens, and encumbrances other than for current taxes not yet due and payable and except for those encumbrances, rights or interests described in Schedule 6 attached hereto.

(g) Except for "material" agreements listed on any other Schedule to this Agreement, Schedule 9 attached hereto lists, as of the day before Closing, all contracts, agreements, leases, commitments, sales orders, and purchase orders which Buyer is to assume hereunder and which are "material", as hereinafter defined. For purposes of this Section 6.1(g), the term "material" as applied to contracts, agreements, leases, commitments, sales orders, and purchase orders of any kind shall mean those which involve future expenditures or receipts having a remaining value, as of Closing, in excess of Twenty Thousand Dollars (\$20,000) and a remaining duration, as of Closing, of twelve (12) months or more; all payments required to be made by Amoco thereunder prior to closing and all other obligations of Amoco to be performed thereunder prior to Closing by the terms thereof will have been made or fulfilled by Closing, unless contested in good faith, and Amoco is not in material breach of any of the provisions thereof.

(h) To the best of Amoco's knowledge after due inquiry, except as set forth in Schedule 10 hereto, as of Closing, Amoco is not in receipt of any written notice that Amoco presently violates in any material respect any applicable local, state or federal

laws, orders, rules or regulations where the violation identified in such notice: (i) relates to the Assets or to Amoco's ownership or use thereof; and (ii) has not been corrected.

(i) To the best of Amoco's knowledge after due inquiry, except as set forth in Schedule 11 hereto, as of Closing, Amoco is not in receipt of any written notice of any pending or threatened condemnations, planned public improvements, annexation, special assessments, zoning or subdivision changes which would materially and adversely affect the use of the Real Property as used by Amoco prior to the Closing.

6.2 Buyer's Representations and Warranties. Buyer represents, warrants and covenants to and with Amoco, and it shall be a condition of the obligations of Amoco hereunder, that:

(a) Buyer is a corporation duly organized, validly existing and in good standing under the laws of the State of California, and is duly qualified in each jurisdiction in which the nature of its business requires qualification.

(b) Buyer has and will at Closing have full corporate power and authority to make and perform this Agreement.

(c) The execution, delivery and performance of this Agreement have been duly authorized by all requisite corporate action.

(d) This Agreement constitutes a valid and legally binding obligation of Buyer enforceable in accordance with its terms except as the enforcement thereof may be limited by applicable bankruptcy, insolvency, rearrangement, reorganization or similar debtor relief legislation affecting the rights of creditors generally from time to time in effect and except that specific performance is an equitable remedy and is discretionary.

(e) The execution and delivery of this Agreement and the completion of the transactions of purchase of the Assets hereunder will not, and the lapse of time or the giving of any notice would not, result in any breach or default of any liabilities or obligations of Buyer in a way which will restrict or adversely affect the ability of Buyer to fulfill its obligations hereunder.

(f) The execution and delivery of this Agreement and the completion of the transactions contemplated hereunder will not result in the violation of any applicable laws (including any federal securities laws) by Buyer or, to the best of Buyer's knowledge by any affiliate of Buyer.

(g) Other than any security interest given to Amoco, Buyer has not made or created any security interest in or other

lien or encumbrance on, any of the Inventories or any other raw materials, work in process, finished goods, packaging supplies, materials or supplies, or accounts receivable, in which Buyer may acquire any interest, whether before or after Closing.

(h) The representations and warranties to be given by SMP Inc. in paragraphs 4-12 of the guaranty to be executed and delivered pursuant to Section 8.1(f), and the representations and warranties to be given by Chemtex Print U.S.A., Inc. in paragraphs 4-12 of the guaranty to be executed and delivered pursuant to Section 8.1(f), will be true and correct in all material respects when made and at and as of the Closing with the same force and effect as though made at and as of the Closing.

6.3 Disclaimer of Warranties. Buyer acknowledges and affirms that prior to the Closing it will have made its own independent investigation, analysis, and evaluation of the Assets, the liabilities and obligations to be assumed by Buyer hereunder, and the operations, business and prospects relating to the Assets and such liabilities and obligations. Except for the express warranties contained in Section 6.1 above, all Assets transferred hereunder are sold AS IS, WHERE IS. AMOCO MAKES NO WARRANTY AND SPECIFICALLY MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NONE SHALL BE IMPLIED. ALL WARRANTIES, EXPRESS OR IMPLIED, ARE EXCLUDED.

6.4 Termination of Representations and Warranties.

(a) Amoco shall have no liability or obligation to Buyer for breach of Amoco's representations or warranties under this Article VI or under Section 5.5(c) except with respect to any breach Buyer discovers and as to which it has provided written notice to Amoco, with said notice providing a complete description of the breach, within twelve (12) months after Closing (except in the case of Section 5.5(c), thirty six (36) months after Closing), and subject to points 2) and 3) set forth in Section 10.1.

(b) Except in the case of Section 6.2(h), Buyer shall have no liability or obligation to Amoco for breach of Buyer's representations or warranties under this Article VI except with respect to any breach Amoco discovers and as to which it has provided written notice to Buyer, with said notice providing a complete description of the breach, within twelve (12) months after Closing.

ARTICLE VII. COVENANTS

7.1 Amoco's Covenants. Amoco covenants and agrees as follows:

(a) Consents and Approvals. Amoco shall take all necessary corporate and other action required of it to carry out

the transactions contemplated in this Agreement, and subject to the provisions of Section 1.5 above, use its reasonable efforts to obtain all authorizations, consents, approvals, and amendments of agreements required hereunder.

(b) Access to Records. For a period of five (5) years after the Closing, or until Amoco destroys such records in accordance with its normal schedules for the retention of documents, whichever comes first, Amoco will furnish to Buyer or its authorized representatives, upon the reasonable request of Buyer and with Buyer to bear its and its representatives' costs and expenses, copies of written financial and operating information relating to the Assets, contained in Amoco's books and records and not transferred to Buyer, to the extent that such information is required by Buyer or its authorized representatives for financial reporting, tax or similar purposes, or for purposes of conducting litigation or administrative proceedings with third parties or government agencies and would not violate the terms of any agreement to which Amoco is bound or any applicable law or regulation.

(c) All Reasonable Efforts. Amoco will use its reasonable efforts to obtain the satisfaction of the conditions to Closing set forth in Sections 8.2 and 8.3 of this Agreement.

(d) Operation of the Business. Except to the extent expressly permitted by this Agreement or otherwise consented to by an instrument in writing signed by Buyer, or as listed on Schedule 12 attached hereto, Amoco shall:

(1) From the date of this Agreement through Closing, not make any material change in its current use of the Assets which is outside the ordinary course of business;

(2) From the date of this Agreement until the Closing, not dispose, or commit to dispose of, or make quotations to sell any of the Assets to be transferred hereunder except in the ordinary course of business; and

(3) From the date of this Agreement until the Closing, not acquire or agree to acquire any goods, materials, or services in connection with Amoco's use of the Assets, except in the usual or ordinary course of business, where the amount involved in connection with any single transaction, involving an acquisition or proposed acquisition of goods, materials, or services which are to be transferred or assigned to Buyer hereunder, is in excess of One Hundred Thousand Dollars (\$100,000) in each instance, except with the consent of Buyer, such consent not to be unreasonably withheld or delayed.

(e) Governmental Approvals. Amoco shall (1) in a timely, accurate and complete manner make such filings with and

prepare such applications to any governmental agency whose approval or consent is required for the consummation by Amoco of the transactions contemplated by this Agreement, and (2) provide to Buyer such information as Buyer may reasonably require to make such filings and prepare such applications as may be required for the consummation by Buyer of the transactions contemplated by this Agreement.

7.2 Buyer's Covenants. Buyer covenants and agrees as follows:

(a) Consents and Approvals. Buyer shall take all necessary corporate and other action required of it to carry out the transactions contemplated in this Agreement and, subject to the provisions of Section 1.5 above, use its reasonable efforts to obtain all consents, approvals, permits, licenses and amendments of agreements required hereunder.

(b) Access to Properties and Records. From and after the Closing, Buyer will afford to Amoco and its authorized representatives, with Amoco to bear its and its representatives' costs and expenses, reasonable access during normal business hours to designated officers and employees and the properties, books and records relating to the Assets transferred to Buyer, and Buyer will furnish to Amoco such additional information, and will cooperate with Amoco in such other respects, as Amoco may reasonably request, to the extent that such access and cooperation are required by



Amoco or its authorized representatives for financial reporting, tax or similar purposes, or for purposes of conducting litigation or administrative proceedings with third parties or government agencies and would not violate the terms of any agreement to which Buyer is bound or any applicable law or regulation. Buyer will also afford to Amoco and its certified accountants and their authorized representatives such reasonable access during normal business hours to designated officers and employees and the properties, books and records of Buyer relating to the Assets transferred to Buyer, as may be necessary or appropriate for Amoco to prepare documents to satisfy its financial and tax reporting requirements. Buyer will keep and maintain all books and records transferred to Buyer hereunder for a period of five (5) years from the Closing Date or longer as may be required by statute. At the end of such five (5) year period, Amoco may notify Buyer that such period has expired and that Amoco is exercising its option to reacquire such documents under the following circumstances: in the event Buyer wishes to destroy such records anytime thereafter, it shall first give ninety (90) days prior written notice to Amoco. Amoco shall then have the right at its option, upon prior written notice given to Buyer within said ninety (90) day period, to take possession of said records or portions thereof within one hundred eighty (180) days after the date of Amoco's notice to Buyer of Amoco's election to take possession hereunder. In the event Amoco does not notify Buyer that Amoco is exercising its option to reacquire documents hereunder, Buyer may destroy such records without further obligation hereunder.

(c) Access to Real Property. From and after the Closing, Buyer agrees to be bound to the same extent as Amoco prior to Closing by the Site Access and License Agreement by and between Amoco and the Del Amo Participating Parties, attached hereto as Schedule 13. Further, in addition to the rights of access under Section 5.6(a), Buyer agrees to give Amoco reasonable access to the Real Property if Amoco requires such in connection with the Del Amo Superfund proceeding, or if Amoco has reasonable grounds to believe that the environmental condition of the Real Property is being worsened, whether during or after the three (3) year period referred to in Section 5.6(a).

(d) All Reasonable Efforts. Buyer will use its reasonable efforts to obtain the satisfaction of the conditions to Closing set forth in Sections 8.1 and 8.3.

(e) Governmental Approvals. Buyer shall (1) in a timely, accurate and complete manner make such filings with and prepare such applications to any governmental agency whose approval or consent is required for the consummation by Buyer of the transactions contemplated by this Agreement, and (2) provide to Amoco such information as Amoco may reasonably require to make such filings and prepare such applications as may be required for the consummation by Amoco of the transactions contemplated by this Agreement.

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(f) Liens. Buyer shall not make or create any security interest in or any other lien or encumbrance on, any of the Inventories or any other raw materials, work in process, finished goods, packaging supplies, materials or supplies, or accounts receivable, in which Buyer acquires any interest, whether before or after Closing, until after any payment required under Section 4.3(b) is made.

7.3 Mutual Covenants. Amoco and Buyer covenant and agree that:

(a) Destruction of the Assets. Subject to the provisions of Section 13.1, in the event any of the Assets are destroyed or damaged prior to the Closing by any cause whatsoever, Amoco may elect to repair or replace the affected Assets or, if Amoco does not elect to so repair or replace, the Purchase Price shall be reduced by an amount equal to seventy percent (70%) of the financial book value of the Assets so destroyed or damaged. Both legal and equitable title to the Assets, and risk of loss to the Assets, shall remain with Amoco until the Closing.

(b) Investigation. The parties shall immediately notify each other, in writing, of any information obtained by either of them which indicates, constitutes or reasonably may constitute a violation or breach of any representation, warranty or covenant made herein by the other party. This covenant shall remain in

effect for so long as such representations, warranties and covenants remain in effect.

(c) Ancillary Transactions. At the Closing, Amoco and Buyer shall enter into certain other agreements identified in Article III hereof.

#### ARTICLE VIII. CONDITIONS TO CLOSING

8.1 Conditions Precedent to Obligations of Amoco. The obligations of Amoco under this Agreement to close the transactions contemplated hereunder are subject to the satisfaction on or prior to the Closing of the following conditions, any one or more of which may be waived in writing, in whole or in part, by Amoco.

(a) Accuracy of Representations and Warranties. The representations and warranties of Buyer in Article VI hereof shall have been true and correct in all material respects when made and at and as of the Closing with the same force and effect as though made at and as of the Closing.

(b) Performance of Agreements. Buyer shall have performed all obligations and complied in all material respects with all covenants and conditions contained in this Agreement which Buyer must perform or comply with at or prior to the Closing.

(c) Injunctions. No injunction or any similar legal order prohibiting or restraining consummation of the transactions herein contemplated shall be issued or in effect.

(d) Transfer Documents. There shall have been executed and delivered by Buyer to Amoco the assignment and assumption agreement referred to in Section 1.5.

(e) Benefit Plans. Buyer shall have in effect the benefit plans and programs set forth in Sections 2.3, 2.4, 2.6, 2.7 and 2.8 hereof.

(f) Guaranties. There shall have been delivered to Amoco by Buyer, a guaranty executed by SMP Inc., whereby SMP Inc. shall guarantee to Amoco Buyer's obligations hereunder, provided, however, that such guaranty, with respect to Buyer's obligations under Section 5.5(e), (i) shall only apply to the extent that a release, discharge, disposal or emission of, or exposure to, hazardous waste, hazardous substances, pollutants, contaminants, materials, products or by-products, is caused by Buyer or occurs in connection with Buyer's operations or business, (ii) shall be limited to a maximum amount of one million dollars (\$1,000,000.00), and (iii) shall remain in force and effect only for five (5) years after the Closing Date; such guaranty to be in the form attached hereto as Exhibit J. There shall also have been delivered to Amoco by Buyer, a guaranty executed by Chemtex Print U.S.A., Inc. ("Chemtex"), whereby Chemtex shall guarantee to Amoco Buyer's

h.

obligations under Section 4.3 and under the security agreement executed and delivered pursuant to Section 4.3(d), such guaranty to be in the form attached hereto as Exhibit K. Simultaneous with delivery of the executed SMP Inc. guaranty, Buyer shall deliver to Amoco an executed opinion of counsel in the form attached hereto as Exhibit L. Simultaneous with delivery of the executed Chemtex guaranty, Buyer shall deliver to Amoco a certification by the corporate secretary of Chemtex, in a form acceptable to Amoco, that the signator of the guaranty was at the time of signature an officer of Chemtex and was duly authorized to sign the guaranty on behalf of Chemtex.

(g) Security Interest. There shall have been executed and delivered by Buyer to Amoco, at least five (5) business days before the Closing, the security agreement referred to in Section 4.3(d), and the financing statement referred to in such security agreement.

(h) Legal Matters. All actions, proceedings, instruments and documents required of Buyer to carry out this Agreement and to close the transactions contemplated hereby and all other related legal matters shall be reasonably satisfactory to counsel for Amoco.

(i) Other Documents. There shall have been executed and delivered by Buyer to Amoco such other documents and instruments of assumption as are contemplated under this Agreement to be delivered by Buyer to Amoco at the Closing.

8.2 Conditions Precedent to Obligations of Buyer. The obligations of Buyer under this Agreement to close the transactions contemplated hereby are subject to the satisfaction on or prior to the Closing of the following conditions, any one or more of which may be waived in writing, in whole or in part, by Buyer:

(a) Accuracy of Representations and Warranties. The representations and warranties of Amoco in Article VI hereof shall have been true and correct in all material respects when made and, except as permitted to be supplemented or amended between the date of signing and Closing, at and as of the Closing with the same force and effect as though made on and at and as of the Closing.

(b) Performance of Agreements. Amoco shall have performed all obligations and complied in all material respects with all covenants and conditions contained in this Agreement which Amoco must perform or comply with at or prior to the Closing.

(c) Injunctions. No injunction or any similar legal order prohibiting or restraining consummation of the transactions herein contemplated shall be issued or in effect.

(d) Transfer Documents. There shall have been executed and delivered by Amoco to Buyer the special warranty deed referred to in Section 1.3, the bill of sale referred to in Section 1.4, and the assignment and assumption agreement referred to in Section 1.5 (hereinafter collectively referred to as the "Transfer Documents").

(e) Legal Matters. All actions, proceedings, instruments and documents required of Amoco to carry out this Agreement and to close the transactions contemplated hereby and all other related legal matters shall be reasonably satisfactory to counsel for Buyer.

(f) Other Documents. There shall have been executed and delivered by Amoco to Buyer such other documents as are contemplated under this Agreement to be delivered by Amoco to Buyer at the Closing.

8.3 Conditions Precedent to Obligations of Buyer and Amoco. The obligations of Amoco and Buyer under this Agreement to close the transactions contemplated hereby are, at each such party's option, subject to the following conditions:

(a) Orders and Decrees. There shall not be in force any order or decree, or any governmental complaint praying for an order or decree, restraining or enjoining the Closing of this Agreement or the transactions contemplated hereby and there shall not exist any such order or decree whether or not stayed pending appeal.

(b) Suits and Proceedings. No governmental department, agency, commission or other governmental entity shall have instituted any suit, proceeding or investigation against Amoco or Buyer to restrain, enjoin, prohibit, invalidate or otherwise prevent to a material degree the transactions contemplated by this



Agreement, or to obtain substantial damages from Amoco or Buyer in connection with this Agreement or the transactions contemplated hereby.

ARTICLE IX. CLOSING

9.1 The Closing. Subject to Section 13.4, the closing (the "Closing") of the transactions contemplated hereby shall take place at such place and at such time on such date as to which Amoco and Buyer may mutually agree (such date being referred to herein as the "Closing Date"), and shall be deemed effective as of 11:59 p.m. on the Closing Date.

9.2 Amoco's Obligations. At the Closing, Amoco shall deliver to Buyer the following, at the expense of Amoco:

(a) Transfer Documents. To the extent not delivered previously under Section 8.2(d), the Transfer Documents, together with any other conveyancing documents which may be necessary to transfer to Buyer Amoco's interest in the Assets.

(b) Executed Agreements. Executed agreements in accordance with Article III and all other ancillary agreements contemplated under the other provisions of this Agreement.

(c) Board Resolutions. A certified copy of the resolutions of Amoco's Board of Directors, in the form of Exhibit M attached hereto.

(d) Receipts. Appropriate receipts for the part of the Purchase Price to be paid at Closing.

(e) Other Documents. All other documents and papers as may be required by Section 8.2 hereof as conditions to Closing.

9.3 Buyer's Obligations. At the Closing, Buyer shall deliver to Amoco, at the expense of Buyer:

(a) Purchase Price. The amount required to be paid at the Closing as provided in Section 4.2 hereof.

(b) Instruments of Assumption. To the extent not previously delivered under Section 8.1(d), the assignment and assumption agreement referred to in Section 1.5.

(c) Executed Agreements. Executed agreements in accordance with Article III and all other ancillary agreements contemplated under the other provisions of this Agreement.

(d) Board Resolutions. A certified copy of the resolutions of Buyer's Board of Directors in the form of Exhibit N, attached hereto.

(e) Other Documents. All other documents and papers required by Section 8.1 hereof as conditions to Closing.

ARTICLE X. INDEMNIFICATION

10.1 Indemnification by Amoco. From and after the Closing, but subject to the conditions and limitations set forth in this Agreement, Amoco shall indemnify and save Buyer and its affiliates, and their respective directors, officers and employees, harmless from and against any and all Claims asserted against, incurred or required to be paid by Buyer or its affiliates or the directors, officers or employees of any of them, which are asserted in connection with or arise out of any or all of: (a) the inaccuracy or untruth, in any material respect, of any representation or warranty made by Amoco in Article VI or in Section 5.5(c); (b) any breach of any covenant or obligation of Amoco contained herein; and (c) any Claim allocated to Amoco under Article V; provided, however, that: 1) such Claims must be made within twenty four (24) months from the Closing Date, except that Claims asserted in connection with or arising out of any Claim allocated to Amoco under Section 5.5(d), or asserted in connection with or arising out of the inaccuracy or untruth of any warranty made by Amoco in Section 5.5(c), must be made within thirty six (36) months from the Closing Date, and Claims asserted in connection with or arising out of the inaccuracy or untruth of any representation or warranty made

by Amoco in Article VI must be made within twelve (12) months from the Closing Date; 2) Buyer shall not be entitled to recover from Amoco under any circumstances, and Amoco shall have no liability for, an amount greater than twenty five percent (25%) of the Purchase Price in respect of all such Claims, including Claims asserted in connection with or arising out of any or all of (a), (b) and (c) above; and 3) Buyer shall not assert against Amoco any such Claim involving less than twenty-five thousand dollars (\$25,000) in claimed or anticipated costs until the total cost or anticipated cost of such non-asserted Claims exceeds or is anticipated to exceed fifty thousand dollars (\$50,000) in the aggregate.

10.2 Indemnification by Buyer. From and after the Closing, but subject to the conditions and limitations set forth in this Agreement (including Section 6.4(b)), Buyer shall indemnify and save Amoco and its affiliates, and their respective directors, officers and employees harmless from and against any and all Claims asserted against, incurred or required to be paid by Amoco or its affiliates, or the directors, officers or employees of any of them (regardless of when asserted and regardless of whether a Claim is based in whole or in part on strict liability, willful or intentional misconduct, or the sole or concurrent negligence, ordinary or gross, of Amoco or its affiliates, or their respective directors, officers or employees), which are asserted in connection with or arise out of any or all of: (a) the inaccuracy or untruth, in any material respect, of any representation or warranty made by

Buyer in Article VI hereof; (b) any breach of any covenant or obligation of Buyer contained herein; (c) any Claim allocated to Buyer under Article V; and (d) any item transferred to Buyer in accordance with Sections 1.1(d), 1.1(e), and 1.5. It is understood and agreed that Buyer's obligations as set forth above in this Section 10.2 shall survive Closing and shall be a continuing obligation.

10.3 Claims.

(a) In the event Amoco or Buyer (the "Claimant") desires to make a claim against the other (the "Indemnitor") under Section 10.1 or 10.2, the Claimant shall, within thirty (30) days of service of process upon Claimant or within nine (9) months of other notice or discovery by Claimant of any Claim, whichever is first, subject, however, in the case of a Claim under Section 10.1 to any time limit under Section 10.1, notify the Indemnitor in writing of such Claim and the facts, to the extent such facts are known by Claimant, upon which such Claim is based; provided, however, once Indemnitor has been notified of a Claim, Claimant shall be under no further obligation to notify Indemnitor of amended claims or causes of action or Claims for costs of defense arising in connection with such Claims or amended Claims.

(b) Indemnitor shall, at Indemnitor's sole expense, compromise or defend, through counsel of Indemnitor's own choosing, each Claim asserted against Claimant by a third party (collectively "Third Party Claims") which is subject, in its entirety, to

indemnification by Indemnitor pursuant to this Article X. Indemnitor shall notify Claimant in writing of Indemnitor's acceptance or rejection of Claimant's demand for indemnification hereunder no later than twenty-one (21) days after Indemnitor's receipt of Claimant's notice pursuant to Section 10.3(a) above. Claimant shall cooperate with Indemnitor and Indemnitor's counsel in the compromising of or defending against any such Third Party Claim; provided, however, no compromise of any Claim which affects the ongoing business of the Claimant shall be made without the written consent of Claimant, such consent not to be unreasonably withheld. Should Indemnitor reject Claimant's demand for indemnification, Indemnitor shall state the reasons for such rejection in its notice to Claimant and Claimant shall have the right, at Claimant's expense, to compromise or defend, through counsel of Claimant's own choosing, such Third Party Claim without prejudice to any rights Claimant may have under this Agreement or otherwise in the event indemnification has wrongfully been denied by Indemnitor. Any payment (the "Indemnification Payment") made under this Section 10.3(b) shall: (i) reflect any savings of Claimant resulting by way of deductions, credits or other tax benefits attributable to the payment (or accrual) of the cost or expense to which the Indemnification Payment relates, and (ii) include the amount necessary to hold the Claimant harmless on an after-tax basis from the amount of any United States Federal, state or local income (or the equivalent thereof) taxes required to be paid by Claimant as the result of the Indemnification Payment.

(c) Indemnitor and Claimant shall use their best efforts to cooperate, without prejudice to any rights they may have against each other, in the compromise or defense of any Third Party Claim which is not entirely subject to indemnification by a single Indemnitor hereunder.

ARTICLE XI. CERTAIN CHARGES, TAXES AND EXPENSES

11.1 Allocation. Utility Charges, Real Property Taxes, and Personal Property Taxes including, without limitation, accruals or prepayments thereof (all as individually defined below), shall be allocated directly between Amoco and Buyer as provided in this Article XI.

11.2 Remittance of Charges and Payments. The following charges and payments shall be borne and paid entirely by Amoco to the collecting authorities if due and payable on or before the Closing Date, and shall be borne and paid entirely by Buyer to the collecting authorities if due and payable after the Closing Date:

(a) water, sewer, electricity, gas and other utility charges, if any, applicable to the Assets ("Utility Charges"); and

(b) ad valorem property taxes and payments in lieu thereof imposed on the Assets other than the Real Property ("Personal Property Taxes").

11.3 Remittance of Real Property Taxes. The following taxes and assessments (the "Real Property Taxes") shall be borne and paid entirely by Amoco to the collecting authorities if due and payable prior to or on the Closing Date, and shall be borne and paid entirely by Buyer to the collecting authorities if due and payable after the Closing Date:

(a) ad valorem taxes and payments in lieu thereof imposed upon the Real Property;

(b) general assessments imposed with respect to the Real Property which are made for specific benefits thereto and spread against all real property and improvements thereon in a legally constituted taxing unit in the proportion that the assessed value of each parcel of real property subject to such general assessment bears to the total assessed value of real property with said taxing unit; and

(c) special assessments upon the Real Property whether payable in full or by installments pursuant to an option duly exercised by Amoco prior to the Closing Date.

11.4 Other Taxes and Expenses.

(a) Except as provided in Sections 11.2 and 11.3, any tax, fee, duty, or other like charge (other than tax on or measured by net income, or tax on the general privilege to conduct business



activities in a state), imposed or levied by federal, state, local, or Indian authority upon the manufacture, storage, sale, transportation, or delivery of the Assets in this Agreement, or upon the privilege of performing any of these activities, which Amoco is required to pay or collect, shall be paid by Buyer to Amoco.

(b) In the event Amoco receives an assessment, proposed or otherwise, for any such tax, fee, duty or other like charge, including penalties and interest, if any, Amoco shall give timely notice to Buyer of the assessment and Buyer shall have the opportunity, at its own expense, to contest the assessment. Amoco agrees to cooperate with Buyer in the event Buyer chooses to oppose the assessment whether such assessment is imposed upon Amoco or Buyer.

(c) Except as otherwise expressly provided in this Agreement, each party shall bear and pay its own expenses and taxes incurred in connection with the transactions referred to in this Agreement. With respect to those items which are claimed to be exempt from sales or use tax by the Buyer on any basis, Buyer shall deliver to Amoco at or prior to Closing appropriate certificates establishing the basis for the exemption. Each party will cooperate to the extent practicable in minimizing all taxes and fees levied by reason of the sale and conveyance of the Assets.

(d) Buyer shall be responsible for any state or local excise, sales or use tax or fee imposed on any motor vehicles

transferred hereunder, and shall pay any such tax or fee directly to the proper authority.

11.5 Payments Between Parties. In the event either party ("Payor") pays an amount for which the other party ("Payee") is obligated under this Article XI, the Payor shall present to the Payee evidence of payment, and the Payee shall within fifteen (15) days from the date of such presentation pay such amount to the Payor. In the event either party ("Recipient") receives payments or refunds to which the other party ("Beneficiary") is entitled in whole or in part under this Agreement, the Recipient shall within fifteen (15) days from the date of such receipt pay such amount to the Beneficiary. All payments to be made under this Article XI shall be made by check or wire transfer in immediately available funds.

#### ARTICLE XII. BULK SALES LAW

Buyer hereby waives compliance by Amoco with any bulk sales law which may be applicable.

#### ARTICLE XIII. TERMINATION; TERM; AMENDMENT

13.1 Damage to Assets. This Agreement may be terminated prior to the Closing by Buyer if the Assets are damaged between the date hereof and Closing to the extent more than five hundred thousand dollars (\$500,000.00) of repairs would be required to

place the Assets in the same condition they were in as of the signing of this Agreement. Buyer's exercise of this right of termination shall be by written notice to Amoco.

13.2 Term. Except as otherwise provided herein, this Agreement and the terms and conditions hereunder survive the Closing, continue forever, and never terminate.

13.3 Amendment. At any time prior to the Closing Date, this Agreement may be amended or modified in any respect by the proper officers of the parties by an agreement in writing executed in the same manner as this Agreement.

13.4 Termination. Either party may terminate this Agreement, upon ten (10) days prior written notice to the other party, at any time after April 14, 1993, in the event the Closing has not taken place as of such date through no fault of the terminating party.

#### ARTICLE XIV. MISCELLANEOUS

##### 14.1 Further Assurance.

(a) After the Closing, Amoco shall from time to time, at Buyer's request and without further cost or expense to Buyer, prepare, execute and deliver to Buyer such other instruments of conveyance and transfer (including without limitation, additional assignments suitable for recording) and take such other action as

Buyer may reasonably request so as more effectively to sell, transfer, assign and deliver and vest in Buyer title to and possession of the Assets as provided in this Agreement, and to implement the covenants hereunder that are to be performed by Amoco after the Closing.

(b) After the Closing, Buyer shall from time to time, at Amoco's request and without further cost or expense to Amoco, prepare, execute and deliver to Amoco such other instruments of assumption and security and take such other action as Amoco may reasonably request so as more effectively to assume the contracts, agreements, leases and commitments assumed by Buyer hereunder and to implement the covenants hereunder that are to be performed by Buyer after the Closing.

14.2 Brokers. Each of the parties hereto represents and warrants to the other that no broker or finder has acted on its behalf in connection with the transactions contemplated by this Agreement. Each of the parties agrees to indemnify, defend and hold the other party harmless from and against any claim or demand for any commission, compensation or other payment by any other broker, finder or similar agent claiming to have been or that was in fact employed by or on behalf of the first party.

14.3 Expenses. Whether the transactions contemplated hereby are consummated, each party shall pay its own respective expenses (including, without limitation, the fees, disbursements and

expenses of its attorneys, accountants, investment advisors and other consultants) in connection with the negotiation, preparation and execution of this Agreement and the transactions contemplated hereby, except as otherwise provided in this Agreement.

14.4 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original instrument, but all such counterparts together shall constitute but one agreement.

14.5 Exhibits and Schedules. All Exhibits and Schedules annexed hereto and the documents and agreements to be delivered and the acts to be performed at or subsequent to the Closing ("Items") are incorporated herein and expressly made a part of this Agreement as fully as though completely set forth herein, and all references to this Agreement herein or in any of such Items shall be deemed to refer to and include all of said Items. To the extent there is a conflict between the provisions of this Agreement and the provisions of any Exhibit annexed hereto, the provisions of the Exhibit shall prevail; to the extent there is a conflict between the provisions of this Agreement and the provision of any Schedule annexed hereto, the provisions of the Agreement shall prevail.

14.6 Waiver. The failure of any party at any time or times to enforce or require performance of any provision hereof, or to exercise a right, shall in no way operate as a waiver or affect the right of such party at a later time to enforce the same or to

exercise such right. No waiver by any party of any condition or the breach of any term, covenant, representation or warranty contained in this Agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach, or a waiver of any other condition or of any breach of any other term, covenant, representation or warranty contained in this Agreement. Any waiver of an obligation, agreement or condition contained herein shall be valid and effective only if in writing and signed by the party to whom such compliance is owed.

14.7 Confidentiality Agreements. The letter agreement entered into between Amoco and Chemtex Inc. dated July 1, 1992 relating to disclosure of Amoco information pertaining to the Assets (the "Confidentiality Agreement") shall terminate as of Closing.

14.8 Notices.

(a) Notices under this Agreement shall be given in writing and delivered:

If to Amoco to:	Amoco Chemical Company Attn.: Vice President and General Manager, Olefins and Polymers 200 East Randolph Drive Chicago, Illinois 60601 Facsimile No.: (312) 856-7026
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If to Buyer to: SMG Industries, Inc.  
Attn.: President  
3061 Maria Street  
Rancho Dominguez, California 90221  
Facsimile No.: (310) 631-1673

or to such other address or individual as may be designated by such party.

(b) Notices shall be deemed to have been given:

(1) On the next succeeding business day if the notice has been delivered by hand or sent by facsimile; or

(2) On the next succeeding business day following receipt of a notice sent by registered or certified U.S. mail, return receipt requested, as evidenced by the return receipt card properly endorsed by the receiving party.

14.9 Entire Agreement. This Agreement, including the Schedules and Exhibits hereto, and the Confidentiality Agreement constitute the entire Agreement between the parties hereto pertaining to the subject matter hereof and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, of the parties, and there are no warranties, representations or other agreements between the parties in connection with the subject matter hereof except as specifically set forth herein or in documents delivered pursuant hereto. No supplement, modification, waiver or termination of this Agreement

shall be binding unless executed in writing by the party to be bound thereby.

14.10 Severability. If any provision of this Agreement shall hereafter be held to be invalid or unenforceable for any reason, that provision shall be reformed to the maximum extent permitted to come as close as possible in its effects to the invalid or unenforceable provision, failing which, it shall be ineffective to the extent of such invalidity or unenforceability only, with the balance of the provision and the balance of the Agreement continuing in full force and effect. Such occurrence shall not have the effect of rendering the provision in question invalid in any other jurisdiction or in any other case or circumstances, or of rendering invalid any other provisions contained herein to the extent that such other provisions are not themselves actually in conflict with any applicable law.

14.11 Materiality. Except where expressly defined herein, wherever used in this Agreement, terms such as "material" and "materially" shall be interpreted in terms of aggregate potential effect of the matter or issue with respect to which such words are used on or with respect to the Assets taken as a whole.

14.12 Transfer. Amoco and Buyer shall cooperate and take such action as may be reasonably requested by the other to effect an orderly transfer of the Assets with a minimum of disruption to the parties and their employees.



14.13 Publicity. Any public announcements with respect hereto or the transactions contemplated hereby shall be made at such time and in such manner as Amoco and the Buyer shall mutually agree; provided, however, that nothing herein shall prevent any party from making such public announcements as such party may consider necessary to satisfy such party's legal or contractual obligations but in such event the party intending to make such disclosure shall advise the other party in advance of such disclosure and provide such other party with a copy of the text of the information to be disclosed.

14.14 Assignment. Neither party to this Agreement shall assign this Agreement, directly or indirectly, or any part thereof without the prior written consent of the other party. This Agreement shall be binding upon and enure to the benefit of the parties hereto and their respective successors and permitted assigns.

14.15 Captions. The captions in this Agreement are for convenience only and shall not be considered a part of or affect the construction or interpretation of any provision of this Agreement.

14.16 Gender. Whenever appropriate herein, the singular number shall include the plural, the plural shall include the singular, and the use of any gender shall include all genders.

14.17 No Third Party Beneficiaries. Nothing in this Agreement shall entitle any person other than Amoco or Buyer and their respective successors and assigns permitted hereby to any claim, cause of action, remedy or right of any kind.

14.18 Governing Law. This Agreement and the legal relations between the parties shall be governed by and construed in accordance with the law of the State of California, excluding any choice of law rules which may direct the application of the laws of any other jurisdiction, except if an ancillary or other agreement contemplated under this Agreement specifies the law of another state, in which case the law of the other state shall govern such agreement. In any suit, action or proceeding arising out of, connected with or related to this Agreement, Amoco and Buyer irrevocably waive any right to and agree not to request or demand, to the fullest extent permitted by law, trial by jury. Simultaneous with execution and delivery of this Agreement, Buyer shall deliver to Amoco an executed opinion of counsel in the form attached hereto as Exhibit O.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

AMOCO CHEMICAL COMPANY

By: R.M. Lemo

Title: Supervisor, Project Evaluation

SMG INDUSTRIES, INC.

By: Dominic Tan

Title: President

## TABLE OF SCHEDULES

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## SCHEDULE 1

### PARCEL 1:

The easterly 258 feet of the westerly 467 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

### PARCEL 2:

The northerly 12-1/2 feet of the easterly 258 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

### PARCEL 3:

A nonexclusive easement for ingress and egress for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

### PARCEL 4:

The easterly 160.30 feet of the southerly 3 acres of lot 5 of Tract No. 4671, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

### PARCEL 5:

An easement for roadway, ingress and egress purposes over the northerly 25 feet of the westerly 25 feet of the easterly 160.30 feet of lot 6 of Tract No. 4671, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

**SCHEDULE 2: EQUIPMENT LIST**

**AMOCO CHEMICAL COMPANY - TOK ACE POLYSTYRENE BATCH PLANT**

1

EQUIPMENT NO.    SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	DWG	ASSET NO	COST
	LAND (ADJACENT PURCHASED), 3.0 ACRES	0 11/66	001 1000	LAND, 3.0 ACRES	250	51921011	69,000.00
	LAND (ORIGINAL PURCHASE), 1-1/2 ACRES	0 7/63	001 1000	LAND, 1-1/2 ACRES	250	51921010	27,793.49
	LAND CLEAN AND FILL	0 2/67	001 3000	LAND CLEAN AND FILL	-	51921012	1,142.60
	LAND OPTION ON 3.0 ACRES	0 8/69	001 3000	LAND OPTION	-	51921013	1,000.00
	SPILL CONTAINMENT	0 2/91	019 1099	FEED TANK FOUNDATIONS	250	55924940	146,717.39
	FENCING, RR SIDING	0 12/91	025 2010	FENCE, METAL W/ SLATS	-	56019104	7,178.00
	FENCING AND GATE, CHAIN LINK	0 11/69	025 2010	FENCING, CHAIN LINK	-	51921014	260.98
	FENCING	0 12/75	025 2050	FENCING	-	52143987	2,260.00
--5800	AUTO GATE, PLANT ENTRANCE	0 12/90	025 3010	AUTO GATE	250	55907404	1,207.00
--5800	AUTO GATE INSTALL	0 12/90	025 3010	AUTO GATE INSTALL	-	55907405	5,250.00
5700	BLOCK RETAINING WALL	0 8/76	025 6040	BLOCK RETAINING WALL	-	52332258	1,746.90
	WALL AND PAVING	0 12/75	025 6040	WALL AND PAVING	-	52143988	6,036.00
	ASPHALT PAVING, YARD & ROADWAY	0 7/71	034 7010	PAVING	-	51921015	6,933.77
	ASPHALT PAVING	0 12/91	034 7010	SPEED BUMPS	250	56021795	2,417.77
5700	PAVE YARD & DRAIN IMPROV	0 9/82	034 8000	YARD PAVE & DRAIN IMPROV	-	53065487	1,801.81
	PUBLIC SEWER CONNECTION	0 7/71	043 1000	PUBLIC SEWER TIE-IN	-	51921016	4,591.89
	CONCRETE SLAB AND CURB	0 2/67	043 1099	SLAB AND CURB	-	51946970	2,645.00
	COUNTY SEWER CONNECTION	0 11/69	043 1099	CO. SEWER CONN.	-	51946971	420.00
	GRADING AND PAVING	0 10/66	049 0172	GRADE AND PAVE	-	51921018	3,580.00
	IMPROVEMENTS (NOT SUPPORTED)	0 7/63	049 0172	LAND IMPROVEMENTS	-	51921017	3,470.72
	PAVING AND GRADING	0 7/75	049 0172	GRADE AND PAVE	-	52049368	1,871.00
	SUMP IMPROVEMENTS	0 11/69	049 0172	SUMP WORK	-	51921019	637.00
	NORTH SIDE CONCRETE BLOCK WALL	0 7/71	049 0177	NORTH WALL	-	51921020	1,409.48
	WESTSIDE BLOCK WALL	0 8/71	049 0177	WEST BLOCK WALL	-	51921021	1,825.00
	FILL AND GRADE PARKING SPACES	0 4/66	049 0180	PREP PARKING SPACES	-	51921024	150.00
	FILL AND GRADING	0 10/63	049 0180	FILL AND GRADING	-	51921023	283.00

BPACC00070

**AMOCO CHEMICAL COMPANY - TOR CE POLYSTYRENE BATCH PLANT**

2

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
--5800	SOIL INVESTIGATION	0 12/91	049 0181	SOIL INVESTIGATION	-	56019105	2,475.20
	OUTSIDE LIGHTING	X 11/69	049 0185	OUTSIDE LIGHTING	-	51921025	872.92
	FIRE WALL, NORTHSIDE	0 7/71	049 1077	NORTH FIREWALL	-	51921022	3,469.58
	COMPRESSOR SHED	0 6/83	053 5149	COMPRESSOR SHED	250	53161151	3,276.24
	FIRE DAMAGE	0 12/90	053 5149	FIRE DAMAGE (10/90)	-	55907399	43,000.00
	SUMP PUMP COVER	0 9/88	053 9845	SUMP PUMP COVER	-	55581512	725.33
	LUNCH ROOM REMODEL	0 7/89	054 7669	LUNCH ROOM REMODEL	-	55684943	7,414.30
	BUILDING, MAINTENANCE	0 7/71	054 7740	MAINT BUILDING	250	51921116	15,091.09
	BUILDING, MAINTENANCE ADD	0 7/75	054 7740	MAINT BUILDING ADD	250	52049369	19,342.62
	BUILDING, MOTOR CONTROL ROOM	0 12/91	055 5099	CONCRETE BLOCK MCC	238	56019088	20,161.94
--1500	MCC PARTS	0 6/92	055 5099	MISCELLANEOUS MCC PARTS	-	-	526.37
	MCC PARTS	0 6/92	055 5099	MCC THERMOMETER	-	-	304.00
	MCC ENGINEERING SERVICES	0 6/92	055 5099	ENGINEERING SERVICES	-	-	1,365.00
	BUILDING, FRONT OFFICE REMODEL	0 12/91	060 6219	FRONT OFFICE REMODELING	250	56019103	9,340.15
	BUILDING, BREAKROOM	0 12/91	060 6219	BREAKROOM REMODELING	-	56019102	13,852.28
	NEW ELECT SYS, MCC & DISTRIBUTION	0 12/90	060 6219	1990 ELECT UPGRADE	238	55907389	116,604.57
	BUILDING, PLANT	0 7/62	060 6240	PLANT BUILDING	250	51921129	65,779.24
	HEATER SHED	0 2/67	060 6245	HEATER SHED	250	51921130	829.18
	AWNINGS, ALUMINUM	0 9/65	060 6249	AWNINGS, AL	-	51921026	211.76
	CONTROL ROOM	0 12/77	060 6249	CONTROL ROOM	250	52518190	5,997.01
5800	LUNCH AND LOCKER FACILITIES	0 7/71	060 6249	LUNCH & LOCKER AREA	250	51921029	8,526.96
	OFFICE RELOCATE & ENLARGE	0 7/71	060 6249	OFFICE ENLARGE	250	51921028	20,177.14
	SPRINKLER HEADS	0 12/64	060 6249	SPRINKLER HEADS	-	51921131	180.00
	SPRINKLERS FOR STORAGE ROOM	0 2/81	060 6249	SPRINKLERS, STG ROOM	-	52904386	1,185.00
	WAREHOUSE LIGHTING	0 12/72	060 6249	LIGHTING, WAREHOUSE	-	51921132	1,920.00
	WAREHOUSE DOORS	0 7/71	060 6249	WAREHOUSE DOORS	250	51946972	1,150.48

BPACC00071



**AMOCO CHEMICAL COMPANY - TOR /CE POLYSTYRENE BATCH PLANT**

3

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	DWG	ASSET NO	COST
5800	NEW ROOF	O 7/89	062 5029	NEW ROOF	-	55684940	19,000.00
	DAP TECH, MICRO FLEX PC1000 DATA COMPUTER, HAND HELD	X	162	MICRO FLEX	LAB	-	
	ELECTRIC STIRRER	X	162	CORNING	LAB	-	-
	GUM TAPE MACHINE	X	162	GUM TAPE MACHINE	LAB	-	500.00
	PORTABLE SEIVE SHAKER	X	162	COMBUSTION ENGINEERING	LAB	-	-
	PYROCOM TEMP PROBE	X	162	TEMPERATURE PROBE	LAB	-	
	SOLIDS METER	X	162	NALCOMETER #512M5	LAB	-	-
	SPECTROPHOTOMETER	X	162	BAUSCH & LOMB SPECTRONIC 20	LAB	-	1,900.00
	SPECTROPHOTOMETER	X	162	MILTON ROY COMPANY SPECTRONIC 21	LAB	-	1,900.00
M-989	ANALYTICAL BALANCE, OHAUS 1210	X 11/66	162 0070	BALANCE	LAB	51921133	220.00
E-108	WATER BATH, A-LINE	X 11/69	162 0140	WATER BATH, A-LINE	253	51921135	655.20
E-308	WATER BATH, 20' Lx3' Wx9"D, SS	O 12/68	162 0140	WATER BATH C LINE	259	51921134	2,636.84
E-408	WATER BATH	O 7/69	162 0140	WATER BATH, D LINE	263	52355143	2,157.10
	E-108 MODIFICATION	O 12/80	162 0149	E-108 MODIFICATION	253	52884918	500.00
M-900	WATER BATH	? 11/80	162 0190	LAB BATH	???	52865691	331.26
M-954	COLORIMETER, HUNTER, LABSCAN 5100, S/N 12830 w/MONITOR	O 6/88	162 0510	COLORIMETER, HUNTER LAB S/N 12830	LAB	55534019	18,827.30
M-920	FUME HOOD, Labconco	O 7/89	162 2990	LAB FUME HOOD	LAB	55684942	4,459.05
	FUME HOOD, Labconco	O 7/89	162 2990	FUME HOOD	LAB	w/ABOVE	
M-953	BUTTON PRESS, CARVER, S/N 23100-176	X 11/70	162 4540	LAB BUTTON PRESS	LAB	52116089	760.00
M-991	MELT FLOW TESTER, Tinius-Olsen, w/AutoTimer, UE-86	O 11/72	162 6190	FLOW MELT TESTER	LAB	52116091	2,461.44
	MELT FLOW TESTER, Tinius-Olsen, w/AutoTimer, UE-4-78	O 11/72	162 6190	FLOW MELT TESTER	BLO	-	2,461.44
M-996	STIFFNESS TESTER	X 9/65	162 6190	STIFFNESS TESTER	LAB	52116088	815.00
M-997	DIGITAL THERMOMETER, ELECTRO-THERM, MODEL HT-680	O 12/86	162 6240	DIGITAL THERMOMETER	LAB	55246585	331.47
P-1304	LIMIT SWITCH	O 12/91	176 0080	P-1304, P-1308 PRESSURE RELIEF	276	56026453	358.00
5200	CAPACITORS, ELECTRICAL	O 4/80	176 0090	CAPACITORS, ELECT	MCC	52751444	8,900.00
	CAPACITORS	O 12/91	176 2000	NEW MCC	244	56019037	68,532.19
	EMERGENCY GENERATOR w/Diesel Engine	O 3/74	176 3010	EMERGENCY GENERATOR W/ENGINE	250	52116094	14,734.40

BPACC00072

**AMOCO CHEMICAL COMPANY - TORI E POLYSTYRENE BATCH PLANT**

EQUIPMENT NO. S/N	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	DWG	ASSET NO	COST
	G-1501 INSTALLATION	O 3/74	176 3101	INSTALL GENERATOR	-	51921144	6,599.75
	G-1501 ELECTRICAL TRANSFER SWITCH	O 3/74	176 3109	EMERG GEN XFR SWITCH	250	51921145	1,508.00
	TIMER, GRALAB, MODEL 167	X	176 6450	TIMER	LAB	-	460.00
M-994	TIMER, GRALAB, MODEL 167, S/N 816478Y	X	176 6450	TIMER	LAB	-	460.00
M-990	TIMER, GRALAB, MODEL 167, S/N 816055	O 11/69	176 6450	TIMER	LAB	51921146	458.20
M-981	LIGHT BOX, Macbeth # 80108	O 5/69	176 9140	LAB LIGHT BOX	LAB	52116147	307.77
??M-982	LIGHT BOX, Macbeth # 81164	O 6/70	176 9140	LAB LIGHT BOX	CR	52116146	358.41
	AREA OUTSIDE LIGHTING, ADDITIONAL	O 4/72	176 9410	AREA LIGHTING, ADDITIONAL	-	51921173	1,825.99
	AREA OUTSIDE LIGHTING INSTALLATION	O 7/71	176 9410	AREA LIGHTING INSTALL	-	51921158	936.00
	AREA OUTSIDE LIGHTING	O 7/71	176 9410	AREA LIGHTING	-	51921157	2,451.93
	B-1404 & 1405 ELECT	O 8/71	176 9410	BLEND SYS ELECT	-	51921155	332.48
	B-1404 & 1405 ELECT	Y 7/71	176 9410	BLEND SYS ELECT	-	51921154	578.76
	B-1404 & 1405 ELECT	O 1/72	176 9410	BLEND SYS ELECT	-	51921165	693.45
	C-1503 ELECTRICAL	O 10/72	176 9410	VACUUM SYS ELECTRIC		51921174	482.14
--1500	C-1505 ELECTRICAL	O 11/76	176 9410	C-1505 ELECTRICAL	-	52436918	999.23
	D-1103 ELECTRICAL	O 11/72	176 9410	ELECT for D-1103		51921175	227.57
	ELECTRICAL	O 12/91	176 9410	CODE CORRECTIONS	-	56021790	17,227.60
	ELECTRICAL STARTERS	O 12/91	176 9410	MOTOR CONTROL CENTER	-	56021797	3,325.60
	EMERGENCY LIGHTING, BATTERY LIGHTS	O 11/72	176 9410	EMERG LIGHTS	-	51921166	1,129.06
	EMERGENCY LIGHTING, INSTALLATION	O 11/72	176 9410	EMERG LIGHTS INSTALL	-	51921167	557.64
	F-1420 FITTINGS, ELECT	Y 5/73	176 9410	F-1420 ROTARY VALVE, ELECT	-	51921177	326.08
	G-1501 ELECTRICAL	O 3/74	176 9410	ELECT HOOK UP OF GEN		51921178	3,026.67
	G-310 ELECTRICAL	O 5/72	176 9410	G-310 ELECT	259	51921164	257.50
	H-1102 ELECTRICAL	O 4/72	176 9410	H-1102 HTR ELECT		52265578	559.15
--1500	PLANT AIR ELECTRIC	O 1/72	176 9410	ELECT, PLANT AIR	-	51921172	1,140.41
	R-102 ELECTRICAL	O 8/80	176 9410	R-102 ELECTRIC	252	52884919	16,063.34

BPACC00073

**AMOCO CHEMICAL COMPANY - TOI ICE POLYSTYRENE BATCH PLANT**

5

EQUIPMENT		DATE ACQD	ASSET LEDGER INFORMATION				
NO.	SUF		P & R	SPECIFICATIONS	PMS	ASSET NO	COST
		O 12/68	176 9410	for R-301	258	51921147	8,077.57
		O 12/69	176 9410	ELECT FOR D LINE		51921159	4,499.11
		O 7/69	176 9410	REACTORS R-401 & 402		51921149	30,504.97
		O 7/71	176 9410	ELECT FOR D LINE ADD		52355144	5,552.75
		O 11/72	176 9410	ELECT S-1401	-	51921176	76.99
		O 3/74	176 9410	ELECTRIC	-	51921180	1,113.38
		O 5/72	176 9410	ELECT	-	51921171	1,160.78
		O 3/74	176 9410	ELECT	-	51921181	1,113.37
		O 5/72	176 9410	ELECT	-	51921170	1,160.78
		O 12/70	176 9410	ELECT T-8	-	51921151	2,862.52
		O 3/74	176 9410	T-1309 ELECTRIC	-	51921179	2,820.25
		X 5/78	176 9410	T-1406 ELECT	-	52556327	1,454.13
		O 1/72	176 9410	X-120 ELECT		51921169	1,109.46
		O 12/82	176 9419	T-1406 PRESS SWITCH	-	53111586	338.81
		O 12/82	176 9419	T-1406 STOP/GO SWITCH	-	53111589	427.37
		O 12/82	176 9419	T-1407 PRESS SWITCH	-	53111587	338.81
		O 12/82	176 9419	T-1407 STOP/GO SWITCH	-	53111590	427.37
		O 12/82	176 9419	T-1408 PRESS SWITCH	-	53111588	338.82
		O 12/82	176 9419	T-1408 STOP/GO SWITCH	-	53111591	427.37
C-1401		O 7/71	188 1000	B-1403 BIN BLOWER	282	51921188	1,560.00
C-1401-EM	B-1403 HOLDING BIN BLOWER, Schwitzer, 4½"x4" C-1401 BLOWER MOTOR, 15 hp	O 7/71	w/C-1401	C-1401 BLOWER MOTOR	282	w/C-1401	
C-1402		O 4/74	188 1000	B-1404 BLOWER	282	52230511	5,942.93
C-1402-EM	B-1405 BAGGER/BLENDER BLOWER, Duraflow-4509V8 C-1402 BAGGER/BLENDER BLOWER MOTOR, 30 hp, 1770 rpm	O 4/74	w/C-1405	C-1402 BLOWER MOTOR	282	w/C-1402	
C-1419-EM	C-1419 BLOWER MOTOR, 25 hp, 1775 rpm	O 7/71	188 1000	C-1419 MOTOR, 25 hp	284	51921191	2,350.00
5200	EQUIPMENT BLOWER	O 7/63	188 1000	EQUIP EXHAUST BLOWER	-	51921192	386.40
C-1602+EM	FINES AND WASTE BLOWER TO B-1601, 3 hp	X 2/66	188 1000	FINES BLOWER TO D-1601	-	51921185	432.00
C-1403		O 8/71	188 1000	T-1401 BLOWER	283	51921190	1,441.64
C-1403-EM	T-1401 BLOWER, Sutorbilt, 4"x4"-7HB(Below Silo # 1) C-1403 BLOWER MOTOR, 25 hp	O 8/71	w/C-1403	C-1403 BLOWER MOTOR	283	w/C-1403	

BPACC00074

**AMOCO CHEMICAL COMPANY - TORI E POLYSTYRENE BATCH PLANT**

6

EQUIPMENT NO. & SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & P	SPECIFICATIONS	DWG	ASSET NO	COST
C-116 C-116-EM	TRANSFER BLOWER, 200 cfm C-116 BLOWER MOTOR, 2 hp, 3505 rpm	X 7/63 O 7/63	188 1000 w/C-116	TRANS BLOWER w/MOTOR C-116 BLOWER MOTOR	253 253	51921182 w/C-116	386.40
C-316 C-316-EM	TRANSFER BLOWER for B-318 C-316 TRANSFER BLOWER MOTOR, 2 hp	X 12/68 X 12/68	188 1000 w/C-316	TRANS BLOWER, C LINE C-3116 TRANS BLOWER MOTOR	259 259	51921186 w/C-316	380.83
C-416 C-416-EM	TRANSFER BLOWER for S-401 C-416 TRANSFER BLOWER MOTOR, 3 hp	X 7/69 X 7/69	188 1000 w/C-416	C-416 BLOWER C-416 BLOWER MOTOR	263 263	52355182 w/C-416	832.43
C-409 C-409-EM	WATER STRIPPER BLOWER WATER STRIPPER BLOWER MOTOR, 10 hp	O 7/69 O 7/69	188 1000 w/C-409	WATER STP D-LINE C-409 WATER STP MOTOR	263 263	52355146 w/C-409	2,779.10
C-109 -B C-109-EM	WATER STRIPPER BLOWER C-109 BLOWER MOTOR, 10 hp, 3400 cfm	O 8/80 O 8/80	188 1000 w/C-109-B	A-LINE WATER STRIPPER C-109 WATER STRIPPER MOTOR	253 253	52824190 w/C-109-B	7,390.00
C-309 C-309-EM	WATER STRIPPER BLOWER WATER STRIPPER BLOWER MOTOR, 1.5 hp, 3000 rpm	X 12/68 X 12/68	188 1000 w/C-309	WATER STRIPPER C LINE WATER STRIPPER C LINE MOTOR	259 259	52116114 w/C-309	1,150.50
	C-109 MODIFY (STAND)	O 7/63	188 1009	C-109 STAND	252	52904387	208.00
C-1417	BLOWER	O 12/91	188 1020	SUTORBILT MHL	-	56022938	1,346.06
C-1416 -B C-1416-EM	B-318 BAGGER BIN TRANSFER BLOWER C-1416 BLOWER MOTOR, 10 hp, 1725 rpm	O 8/83 O	188 1980 w/T-1402	C-1416 BLOWER, YOUNG C-1416 BLOWER MOTOR	259 259	53167988 w/T-1402	740.67
C-1412 C-1412-EM	BLOWER FOR SILOS 6,7 & 8(Below Silo # 8) C-1412 BLOWER MOTOR, 40 hp, 3545 rpm	O 7/81 O	188 1980 w/C-1412	C-1412, SILO 6,7 & 8 BLOWER C-1412 BLOWER MOTOR	285 285	52946627 w/F-1412	4,082.96
5200	EXHAUST FAN	O 10/79	188 2000	EXHAUST BLOWER	-	52682043	71.30
5200	ROOF FAN UNITS (4)	O 7/63	188 2000	ROOF FAN UNITS	WHR	51921193	5,524.48
5200	TUBE FAN COOLING COIL	O 7/63	188 2000	TUBE FAN COOLING COIL	WHR	51921194	2,044.20
C-1502 C-1502-EM	C-1502 AIR COMPRESSOR C-1502 AIR COMPRESSOR MOTOR, 25 HP	O 7/71 O 7/71	188 9000 w/C-1502	C-1502 AIR COMPRESSOR C-1502 AIR COMPRESSOR MOTOR	289 289	52116095 w/C-1502	3,416.00
C-1505 C-1505-EM	C-1505 AIR COMPRESSOR C-1505 AIR COMPRESSOR MOTOR, 25 HP	O 11/76 O 11/76	188 9000 w/C-1505	C-1505 AIR COMPRESSOR C-1505 AIR COMPRESSOR MOTOR	289 289	52369919 w/C-1505	4,988.00
P-124 P-124-EM	DEVOL VACUUM PUMP, Leybold Model: SV180 P-124 MOTOR, 7.5 hp	O 12/90 O 10/90	189 0000 w/P-124	A-LINE VACUUM PUMP, Leybold P-124 MOTOR	254 254	55907403 w/P-124	6,162.30
P-131+MS P-131-EM	R-101 HOT OIL CIRC PUMP, Dean Bros, R-454 P-101 MOTOR, 50 hp	O 12/90 O 12/90	189 0000 w/P-131	P-131 H.O. CIRC PUMP w/Mech Seal P-131 MOTOR	252 252	55907406 w/P-131	7,311.20
	SUMP PUMP MOTOR	O 9/88	189 0000	SUMP PUMP MOTOR		55581509	270.56
P-324 P-324-EM	DEVOL VACUUM PUMP, Leybold, SV180 P-324,DEVOL VACUUM PUMP MOTOR, 7.5 hp	O 10/90 O 10/90	189 5550 w/P-324	324 VAC PUMP, Leybold J901102025 D-LINE VACUUM PUMP MOTOR	260 260	55879131 w/P-324	6,119.13

BPACC00075

**AMOCO CHEMICAL COMPANY - TOROLACE POLYSTYRENE BATCH PLANT**

7

EQUIPMENT NO. SUB	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	QMG	ASSET NO	COST
P-424-EM	P-424, DEVOL VACUUM PUMP MOTOR, 7.5 hp	O 6/90	w/P-424	D-LINE VAC PUMP MOTOR	264	w/P-424	
C-1503	C-1503 VACUUM SYSTEM	O 10/72	189 9000	LINE VACUUM SYSTEM	300	52265593	4,000.00
C-1503-EM	C-1503 VACUUM SYSTEM BLOWER MOTOR, 10 hp	O 10/72	w/C-1503	C-1503, VACUUM SYSTEM MOTOR	300	w/C-1502	
P-133+MS -B	D-101 HOLDING TANK H.O. CIRC PUMP, Dean Bros,R-434,2"x3"	X 8/80	189 9000	D-101 TK H.O. PUMP	253	52824192	3,440.13
P-133+EM -B	D-101 H.O. CIRC PUMP MOTOR, 5 hp, 1750 rpm	X 7/63	189 9000	P-133 MOTOR	253	52438760	884.40
P-103 -B	D-101, HOLDING TANK FORWARDING PUMP, 10"sq.in x 6"out	O 9/80	189 9000	D-101 FORWARDING PUMP	253	52844103	14,157.00
P-104 -B	D-102, DEVOL FORWARDING PUMP	O 7/63	189 9000	D-102 FORWARD PUMP	253	51921209	1,998.96
P-1105	D-1103 FILL PUMP, Viking Gear, 1/2"x 1/2"	X 9/66	189 9000	D-1103 FILL PUMP	269	51921217	140.00
P-1105-EM	P-1105 PUMP MOTOR, 1/2 hp	X 9/66	w/P-1105	P-1105 FILL PUMP MOTOR	269	w/P-1105	
P-1108	D-1103 TRANSFER PUMP, Cent, 1 1/4"x1"	X 7/63	189 9000	D-1103 XFR PUMP	269	51921294?	205.00
P-1108-EM	P-1108 TRANSFER PUMP MOTOR, 1/2 hp	X 7/63	w/P-1108	P-1108 XFR PUMP MOTOR	269	w/P-1108	
P-1305	D-1305 CONDENSATE PUMP, Viking Gear, 1/2" x 1/2"	O	189 9000	P-1305 CONDENSATE PUMP	287	-	250.00
P-1305-EM	P-1305 CONDENSATE PUMP MOTOR, 1 hp	O	w/P-1305	P-1305 MOTOR	287		
P-1301	D-1310 PUMP, Viking Gear, 1" x 1"	O 4/83	189 9000	D-1310 PUMP	252	53141958	171.50
P-1301-EM	P-1301 PUMP MOTOR, 1/2 hp	O 7/63	w/P-1301	P-1301 PUMP MOTOR	252	w/P-1301	
P-1303+MS	D-1312 PUMP, GEAR PUMP	X 7/69	189 9000	D-1312 PUMP	262	52355148	185.81
P-1303-EM	P-1303 PUMP MOTOR, 1 hp	X 7/69	w/P-1303	P-1303 PUMP MOTOR	262	w/P-1303	
P-303	D-301 FORWARDING PUMP	X 12/68	189 9000	D-301 FWD PUMP	259	52965764	1,113.00
P-304-VS	D-302 FWD PUMP VARI-DRIVE, Sterling	O 12/81	189 9000	D-302 FWD PUMP VARI-DRIVE	259	52997371	7,863.42
P-304-EM	P-304 PUMP MOTOR, 7.5 hp, 1760 rpm	O 12/81	w/P-304VS	D-302 FWD PUMP MOTOR	259	w/P-304	
P-304	D-302 FWD PUMP	O 12/68	189 9000	D-302 FWD PUMP	259	51921220	2,739.34
P-403	D-401 FORWARDING PUMP, 10"Sq x 6"	O 7/69	189 9000	R-401 FWD PUMP	263	52369893	4,600.00
P-433+MS	D-401 H.O. PUMP, Dean Bros,R-434, 2"x3"x8 1/2"	X 7/69	189 9000	P-433 PUMP w/Mech Seal(91)	263	52355153	1,055.00
P-433-EM	P-433 H.O. PUMP MOTOR, 5hp	X 7/69	w/P-433	P-433 PUMP MOTOR	263	w/P-433	
P-1323	D-421, DEVOL RECEIVER PUMP, Viking Gear, 1" x 1"	X 7/69	189 9000	D-421 DRUM PUMP	264	52355149	185.81
P-1323-EM	D-421, DEVOL RECEIVER PUMP MOTOR, 1 hp	X 7/69	w/P-1323	P-1323 PUMP MOTOR	264	w/P-1323	
P-1321	DEVOL COND PUMP, Viking Gear, 1" x 1"	X 9/64	189 9000	A-LINE COND PUMP	254	51921215	244.20
P-1321-EM	P-1321 MOTOR, 1 hp	X 9/64	w/P-1321	P-1321 MOTOR	254	w/P-1321	
P-1322	DEVOL COND PUMP, Viking Gear, 1" x 1", 1 hp Motor	X 11/64	189 9000	C-LINE COND PUMP	260	51921216	449.78
P-1322-EM	P-1322 DEVOL COND PUMP MOTOR, 1 hp Motor	X 11/64	w/P-1322	P-1322 COND PUMP MOTOR	260	w/P-1322	
P-404	DEVOL FORWARDING PUMP, 10"Sq x 6"	X 7/69	189 9000	D-402 FWD PUMP	263	52355155	1,902.82
		O 12/74	189 9000	E-1503 CIRC PUMP	294	52116148	285.70

BPACC00076

**AMOCO CHEMICAL COMPANY - TORRILLE POLYSTYRENE BATCH PLANT**

8

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	PMG	ASSET NO	COST
P-1308+MS -B P-1308-EM	FEED TRANSFER PUMP Cent. P-1308 ELECTRIC MOTOR, 10 hp, 3480 rpm	O 7/81	189 9000	P-1308 FEED TO REACTORS	276 276	52946628	532.71
P-1304+MS P-1304-EM	FEED TRANSFER PUMP Deming, CENT, 2x1 1/2, DC-435725 P-1311 ELECTRIC MOTOR, 10 hp, 3600 rpm, US	X 6/64 X 6/64	189 9000 189 9000	P-1304 FEED TRANS PUMP FEED PUMP, P-1304	276 276	51921214 w/P-1304	275.00
P-1103 P-1103-EM	H-1103 H.O. CIRC PUMP, Dean Bros, R434, 3"x4"x8 1/2" P-1103 H.O. CIRC PUMP MOTOR, 25 hp, 3530 rpm	X 7/69 X 7/69	189 9000 w/P-1103	P-1103, D-LINE H.O.CIRC PUMP P-1103, D-LINE H.O.CIRC PUMP MOTOR	269 269	52355147 w/P-1103	1,388.55
P-333+MS P-333-EM	HOLDING TANK H.O. CIRC PUMP, Dean Bros, R-434, 2"x3"x8 1/2" HOLDING TANK H.O. CIRC PUMP MOTOR, 5hp, 1750 rpm	X 12/68 X 12/68	189 9000 w/P-333	D-301 H.O. PUMP P-333 MOTOR	259 259	51921223 w/P-333	1,044.63
P-1101+MS P-1101-EM	HOT OIL CIRC PUMP, Dean, R434, 3"x4"x8 1/2" P-1101 HOT OIL CIRC PUMP MOTOR, 20 hp, 3530 rpm	O 7/63 O 7/63	189 9000 w/P-1101	P-1101 H.O.CIRC PUMP w/Mech Seal P-1101 H.O.CIRC PUMP MOTOR	268 268	51921200 w/P-1101	2,900.00
P-1102+MS P-1102-EM	HOT OIL CIRC PUMP, Dean, R434, 3"x4"x8 1/2" P-1102 HOT OIL CIRC PUMP MOTOR, 20 hp, 3530 rpm	O 7/63 O 7/63	189 9000 w/P-1102	P-1102 H.O.CIRC PUMP w/Mech Seal P-1102 H.O.CIRC PUMP MOTOR	268 268	51921197 w/P-1102	3,200.00
P-1602 P-1602-EM	HYDRAULIC SYSTEM PUMP HYDRAULIC SYSTEM PUMP MOTOR, 10 HP	O 7/63 O 7/63	189 9000 w/P-1602	HYDRAULIC PUMP FOR SCREENS HYDRAULIC PUMP MOTOR FOR SCREENS	299 299	51921208 w/P-1602	5,100.00
P-303-VS P-303-EM	P-303 FORWARDING PUMP VARI DRV, Sterling D-301 FORWARDING PUMP MOTOR, 3 hp, 1800 rpm	O 9/81 O 9/81	189 9000 w/P-303-VS	P-303 VARI-DRIVES P-303 FWD PUMP MOTOR	259 259	52964837 w/P-303-VS	3,322.84
P-1506 P-1506-EM	PUMP TO SAND FILTER S-1506 P-1506 PUMP MOTOR, 3/4 hp	O O	189 9000 w/P-1506	P-1506 TO S-1506 P-1506 PUMP MOTOR	293 293	- w/P-1506	250.00
P-101	R-101 FORWARDING PUMP, Stearns-Rogers, 10"Sq x 6"	X 7/63	189 9000	FORWARDING PUMP, R-101	252	51921198	1,052.53
P-132+MS P-132-EM	R-102 HOT OIL CIRCULATING PUMP, Dean Bros, R-454, 6"x8"x12 1/2" R-102 H.O. CIRC PUMP MOTOR, 50 hp, 1770 rpm	X 8/80 X ??	189 9000 w/P-132	R-102 H.O. CIRC PUMP w/Mech Seal P-132 MOTOR	252 252	52824191 w/P-132	8,275.50
P-102	R-102 FORWARDING PUMP	X 9/80	189 9000	R-102 FWD PUMP	252	52844102	14,157.00
P-301 P-301-GD P-301-EM	R-301 FORWARDING PUMP, Gear, 10"Sq x 6" R-301 FORWARDING PUMP GEAR DRIVE R-301 FORWARDING PUMP MOTOR, 7.5 hp, 1760 rpm	O 12/68 O 12/68 O 12/68	189 9000 w/P-301 w/P-301	R-301 FORWARD PUMP P-301 GEAR DRIVE P-301 MOTOR	258 258 258	51921218 w/P-301 w/P-301	2,613.00
P-331+MS	R-302 HOT OIL CIRC PUMP, I-R, 8 x 15A	O 12/68	189 9000	R-301 H.O. PUMP w/Mech Seal	258	51921223	3,904.48
P-401	R-401 FORWARDING PUMP, 10"Sq x 6"	O 7/69	189 9000	R-401 FWD PUMP	262	52355150	4,600.00
P-401-GD P-401-EM	R-401 FWD GEAR DRIVE P-401 FWD PUMP MOTOR, 7.5 hp, 1800 rpm	O 4/74 O 7/69	189 9000 w/P-401-GD	P-401 GEAR DRIVE P-401 MOTOR	262 262	52309665 w/P-401-GD	2,133.00
P-431+MS P-431-EM	R-401 H.O. PUMP, Dean Bros, R-454, 6"x8"x12 1/2", MS(91) R-401 H.O. PUMP MOTOR, 50 hp	O 7/63 O 7/63	189 9000 w/P-431	R-401 H.O. PUMP w/MS R-401 H.O. PUMP MOTOR	262 262	51921212 w/P-431	2,417.76
P-432 P-432-EM	R-402 H.O. PUMP, Dean Bros, R454, 6"x8"x12 1/2", MS(91) P-432 H.O. PUMP MOTOR, 50 hp	O 6/82 O 7/69	189 9000 w/P-432	R-402 H.O. PUMP P-432 H.O. PUMP MOTOR	262 262	53044035 w/P-432	6,050.50
		O 7/69	189 9000	R-402 FWD PUMP	262	52369892	4,600.00

BPACC00077

**AMOCO CHEMICAL COMPANY - TORK JE POLYSTYRENE BATCH PLANT**

9

EQUIPMENT		DATE ACCD	ASSET LEDGER INFORMATION				
NO.	SHE		P & R	SPECIFICATIONS	PMG	ASSET NO	COST
P-1312		X 3/74	189 9000	T-1312 PUMP	275	52116098	690.20
P-1312-EM		X 3/74	w/P-1312	T-1312 PUMP MOTOR	275	w/P-1312	
P-1311+MS		X 12/70	189 9000	T-1308, P-1311 PUMP w/MS	275	51921238	592.00
P-1311-EM		X 12/70	w/P-1311	P-1311 PUMP MOTOR	275	w/P-1311	
P-1503		O 6/92	189 9000	P-1503 FROM BATH CIRC PUMP	294	-	2,030.84
P-1503-EM		O	w/P-1503	P-1503 CIRC PUMP MOTOR	294	w/P-1503	
P-1502		O 12/74	189 9000	P-1502, CHILLER WATER TO BATHS	294	52116149	285.70
P-1502-EM		O 12/74	w/P-1502	P-1502, CIRC PUMP MOTOR	294	w/P-1502	
P-1306		O 1/87	190 2090	P-1306 (Old P-1308)	276	55266921	751.23
P-1306-EM		O 1/87	w/P-1306		276	w/P-1306	
P-1102		O 12/91	191 0200	P-1102 & H-1102 REVISION	268	56019093	17,726.18
P-1101		O 12/91	191 0200	P-1101 & H-1101 REVISION	268	56019091	17,726.19
P-131		O 12/90	191 3200	BR-1 CIRC. PUMP UPGRADE	252	56019090	27,178.29
P-331-EM		O 12/68	192 4430	P-331 H.O. PUMP MOTOR	258	52609239	3,764.27
P-402-GD		O 1/87	197 7800	P-402 GEAR DRIVE	262	55255157	3,898.90
P-402-EM		O 7/69	w/P-401-GD	P-402 MOTOR	262	w/P-401-GD	
S-305-EM		O 6/88	197 7800	S-305 MOTOR, Baldor, >5 hp	259	55534021	149.33
P-101+GD		X 7/63	197 9990	P-101 GEAR DRIVE	252	51921247	1,230.00
P-101-EM		X 7/63	w/P-101-GD	P-101 MOTOR	252	w/P-101-GD	
P-103-VS	-B	O 7/80	197 9990	P-103 VARI DRIVE	253	52809287	3,202.60
P-103-EM		O 7/63	w/P-103	P-103 MOTOR	253	w/P-103	
P-104-VS	-B	O 7/80	197 9990	P-104 VARI DRIVE	253	52809288	5,487.34
P-104-EM		O 7/80	w/P-104-B	P-104 VARI DRIVE MOTOR	253	w/P-104-B	
P-403-VS	-B	O 5/85	197 9990	P-403 VARI-SPEED	263	-	4,148.18
P-403-EM		O 7/69	w/P-403-VS	P-403 MOTOR	263	w/P-403	
P-404-VS		O 6/77	197 9990	P-404 VARI-SPEED DRIVE	263	52458527	3,664.64
P-404-EM		O 6/77	w/P-404-VS	P-404 MOTOR	263	w/P-404-VS	
P-102-GD		X 11/69	197 9990	P-102 FWD PUMP GEAR DRIVE	252	51921253	1,272.36
P-102-EM		X 11/69	w/P-102-GD	P-102 FWD PUMP MOTOR	252	w/P-102-GD	
LG-1101		X 8/90	204 1480	LEVELOMETER	268	-	3,400.00
LG-1102		O 5/89	204 1480	D-1102 LEVEL GAUGE, Levelometer	269	55663313	3,354.66
		O 7/71	204 2140	BUTTON MOLD	LAB	52116093	136.67
				BUTTON MOLD ASSEMBLY			

BPACC00078

**AMOCO CHEMICAL COMPANY - TORX 150 POLYSTYRENE BATCH PLANT**

10

EQUIPMENT NO.    SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	QMS	ASSET NO	COST
M-1601	SCALE, PLATFORM, B-1601 BAGGER	X 6/88	204 4570	SCALES, PLATFORM, M-1601	-	55534020	798.75
	ELECTRIC CART	O 6/92	215 2539	MINI-CRANE ATTACHMENT	MNT	-	2,598.00
	HAND CART	O 9/87	215 3480	HAND CART	VAR	55383256	151.12
F-1401	B-1402 ROTARY VALVE, F-1401, Semco, OBRV-12	O 7/71	215 4180	B-1402 ROTARY VALVE	282	52116108	1,880.00
F-1401-EM	F-1401 ROTARY VALVE MOTOR, 1 hp, 1725 rpm	O 7/71	w/F-1401	F-1401 ROTARY VALVE MOTOR	282	w/F-1401	
F-1402	B-1403 ROTARY VALVE, Semco, OBRV-12	O 7/71	215 4180	B-1403 ROTARY VALVE	282	52116109	1,880.00
F-1402-EM	F-1402 ROTARY VALVE MOTOR, 1 hp, 1725 rpm	O 7/71	w/F-1402	F-1402 ROTARY VALVE MOTOR	282	w/F-1402	
F-1403	B-1404 ROTARY VALVE, Semco, OBRV-12	O 7/71	215 4180	B-1404 ROT VALVE	282	52116110	3,250.00
F-1403+GR	F-1403 GEAR REDUCER, AllispedAJ48	O 7/71	w/F-1403	F-1403 ROT VALVE GEAR REDUCER	282	w/F-1403	
F-1403-EM	F-1403 ROTARY VALVE MOTOR, 1 1/2 hp, 1740 rpm	O 7/71	w/F-1403	F-1403 ROT VALVE MOTOR	282	w/F-1403	
F-1404	BAGGER BIN, B-118, ROTARY VALVE	O 8/71	215 4180	B-118 ROTARY VALVE	253	52116111	822.32
F-1404-EM	F-1404 MOTOR, 1/2 hp, 1725 rpm	O 8/71	w/F-1404	F-1404 MOTOR	253	w/F-1404	
F-1406	S-401 PRODUCT FORWARDING VALVE	O 2/77	215 4180	ROTARY VALVE(END D-LINE)W/MOTOR	263	52419269	1,927.45
F-1406-EM	S-401 PRODUCT FORWARDING VALVE MOTOR, 1/2 hp	O 2/77	w/F-1406	F-1406 ROTARY VALVE MOTOR	263	w/F-1406	
M-321	PORTABLE PLATFORM SCALES	X 2/67	215 8010	PORT PLATFORM SCALE	259	51921266	220.32
M-421	PORTABLE PLATFORM SCALES	X 7/69	215 8010	PORT PLAT SCALES	263	52355159	310.00
M-121	PORTABLE PLATFORM SCALES	X 12/68	215 8010	PORTABLE SCALE	253	51921267	704.58
M-1601	SCALES, PLATFORM, PORTABLE	O 11/69	215 8010	PLAT SCALES	-	51921269	395.00
M-955	SCALE, PRECISION, Ainsworth, TYPE 10N, S/N 51185	X 5/69	215 8050	LAB SCALES	LAB	51921270	678.21
	WEIGHT SET, BECKER-CHRISTEN			WEIGHT SET	LAB		
	RAILROAD SIDING TRACKS	O 12/75	232 0100	RAILROAD SIDING TRACKS	-	52143990	6,903.00
	RENOVATE RAIL SIDING & SPILL CONTAINMENT	X 6/92	232 0100	SOIL REMEDIATION, FIBERGLASS PANS	250	-	128,251.00
	SAFETY GATES	O 2/91	234	SAFETY GATES	-	56021791	2,188.35
	OXYGEN ANALYSER, CALTECH, INC, MODEL 1214S, S/N C1744	X 9/88	234 4490	CALTECH (GASTECH)	LAB	55581508	1,304.63
	FIRE BLANKET, SAFETY, (Seven Locations)	X 72/91	234 7200	WITH CASE	VAR	-	1,260.00
TO-220	STRETCHER, SAFETY, PORTABLE	X	234 7200	PORTABLE STRETCHER	LAB	-	150.00
5500	SAFETY BELT	X 5/83	234 7261	SAFETY BELT	-	53150102	44.43
5500	LADDERS, CAGES, WALL CROSSINGS, HAND RAILS	O 3/74	234 7300	LADDERS, HANDRAILS, ETS	-	51921287	11,214.47
	SIREN, 30152518	O 7/89	234 7980	SIREN		55684941	2,050.89

BPACC00079



**AMOCO CHEMICAL COMPANY - TOI ACE POLYSTYRENE BATCH PLANT**

11

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	DWG	ASSET NO	COST
TO-228	FIRE EXTINGUISHER, # 5, 20# DRY CHEMICAL	O 6/76	234 9610	FE # 5, 20# DRY CHEM	-	52304194	59.00
TO-232	FIRE EXTINGUISHER, # 9, 1# DRY CHEMICAL	O 11/72	234 9610	FE # 9, 1# DRY CHEM	-	51921274	24.14
TO-233	FIRE EXTINGUISHER, # 10, 20# DRY CHEMICAL	X 7/63	234 9610	FE # 10, 20# DRY CHEM	-	51921282	109.50
TO-234	FIRE EXTINGUISHER, # 11, 20# DRY CHEMICAL	O 7/63	234 9610	FE # 11, 20# DRY CHEM	-	w/TO-233	
TO-225	FIRE EXTINGUISHER, # 2, 150# DRY CHEMICAL, CART	X 7/63	234 9610	FE # 2, 150# DRY CHEM CART	-	51921280	535.50
TO-227	FIRE EXTINGUISHER, # 4, 20# DRY CHEMICAL	O 6/76	234 9610	FE # 4, 20# DRY CHEM	-	52304193	59.00
TO-235	FIRE EXTINGUISHER, # 12, 20# DRY CHEMICAL	O 6/76	234 9610	FE # 12, 20# DRY CHEM	-	52304195	59.00
TO-238	FIRE EXTINGUISHER, # 15, 20# DRY CHEMICAL	O 4/77	234 9610	FE # 15, 20# DRY CHEM	-	52441578	59.00
TO-245	FIRE EXTINGUISHER, # 22, 10# DRY CHEMICAL	O 6/76	234 9610	FE # 22, 10# DRY CHEM	-	52304198	43.50
TO-229	FIRE EXTINGUISHER, # 6, 50# DRY CHEMICAL, CART	O 12/72	234 9610	FE # 6, 50# DRY CHEM CART	-	51921275	276.00
TO-236	FIRE EXTINGUISHER, # 13, 20# DRY CHEMICAL	O 6/76	234 9610	FE # 13, 20# DRY CHEM	-	52304196	59.00
TO-242	FIRE EXTINGUISHER, # 19, 20# DRY CHEMICAL	O 11/72	234 9610	FE # 19, 20# DRY CHEM	-	51921276	51.80
TO-237	FIRE EXTINGUISHER, # 14, 20# DRY CHEMICAL	O 4/77	234 9610	FE # 14, 20# DRY CHEM	-	52441577	59.00
TO-224	FIRE EXTINGUISHER, # 1, 30# DRY CHEMICAL	X 7/63	234 9610	FE # 1, 30# DRY CHEM	-	51921281	89.10
TO-243	FIRE EXTINGUISHER, # 20, CO <sub>2</sub> (EMERG GEN ROOM)	O	234 9610	FE # 20, CO <sub>2</sub>	-	-	170.00
TO-247	FIRE EXTINGUISHER, # 24, CO <sub>2</sub>	O	234 9610	FE # 24, CO <sub>2</sub>	-	-	170.00
TO-244	FIRE EXTINGUISHER, # 21, 5# DRY CHEMICAL	O	234 9610	FE # 21, 5# DRY CHEM	-	-	35.00
TO-241	FIRE EXTINGUISHER, # 18, 1# DRY CHEMICAL	O 11/72	234 9610	FE # 18, 20# DRY CHEM	-	51921271	24.14
TO-226	FIRE EXTINGUISHER, # 3, 20# DRY CHEMICAL	O 6/76	234 9610	FE # 3, 20# DRY CHEM	-	52304197	59.00
TO-239	FIRE EXTINGUISHER, # 16, 20# DRY CHEMICAL	O 11/72	234 9610	FE # 16, 20# DRY CHEM	-	51921277	51.80
TO-231	FIRE EXTINGUISHER, # 8, 1# DRY CHEMICAL	O 11/72	234 9610	FE # 8, 1# DRY CHEM	-	51921273	24.14
TO-230	FIRE EXTINGUISHER, # 7, CO <sub>2</sub>	O	234 9610	FE # 7, CO <sub>2</sub>	-	-	170.00
TO-240	FIRE EXTINGUISHER, # 17, 20# DRY CHEMICAL	O	234 9610	FE # 17, 20# DRY CHEM	-	-	59.00
	T-1308 & 1309 FIRE WATER PIPING	O 3/74	234 9620	FIRE PIPING, T-8 & T-9	275	51921282	4,409.38
	SAFETY STATION (Northside BR5 Fin Fans) EyeWash/Shower	O 11/80	234 9810	SAFETY STATION(East)	-	51921283	304.64
	SAFETY STATION (By BR3) EyeWash/Shower	X 3/91	234 9810	SAFETY STATION(East)	-	51921283	304.64
TO-547	SAFETY STATION (Westside E Tk Frm) Eyewash/Shower	O 11/72	234 9810	SAFETY STATION(West)	-	51921284	304.64

BPACC00080

**AMOCO CHEMICAL COMPANY - TOK ICE POLYSTYRENE BATCH PLANT**

12

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	QMG	ASSET NO	COST
TO-546	SAFETY STATION (Eastside E Tk Frm) EyeWash/Shower	0 11/72	234 9810	SAFETY STATION(East)	-	51921283	304.64
	INSTALLATION WEST SAFETY STATION	0 11/72	234 9811	SAFETY STATION(West) INSTALL	-	51921286	367.92
	INSTALLATION EAST SAFETY STATION	0 11/72	234 9811	SAFETY STATION (East) INSTALL	-	51921285	367.92
	PLANT MAINTENANCE CART	0 12/91	245 2000	ELECTRIC CART TRANS-ELECTRIC	MNT	56019106	4,373.30
	FORK TRUCK JIB ATTACHMENT	X	245 8420	RAMPMASTER	-	-	500.00
	FORK TRUCK MANLIFT	X	245 8420	MANLIFT ATTACHMENT	MNT	-	400.00
	PIPE RACK	0 12/91	260 9810	PIPE RACK ADDITION	250	56021796	3,476.51
D-1504	WATER SOFTENER FOR BATH WATER	0 6/84	262 9970	WATER SOFTENER FOR COOLING BATHS	294	53286326	979.00
	HAZOP	0 6/92	263 5145	GENERAL HAZOP CHARGES	-	-	4,950.00
	HAZOP	0 12/91	263 5145	GENERAL HAZOP IMPROVEMENTS	-	56019011	209,184.49
	HAZOP	0 6/92	263 5145	GENERAL HAZOP CHARGES	-	-	24,741.36
	HAZOP	0 12/91	263 5145	GENERAL HAZOP IMPROVEMENTS	-	56021793	19,340.87
	PARTS CLEANER	X	265 1980	McMASTER-CARR A300	-	-	460.00
TO-596	VACUUM CLEANER (PORTABLE)	X 5/96	265 4980	SHOP VACUUM CLEANER	MNT	51921290	555.00
	WET/DRY VACUUM, BLACK & DECKER	0 --/78	265 4980*	WET/DRY SHOP VACUUM	MNT	52629607	216.62
	G-110-C ADD (RAMPS)	0 12/80	265 5990	G-110 RAMPS & PLATFORMS	253	52884920	2,809.00
5200	PLATFORMS & LADDERS	0 10/72	265 5990	PLATFORMS & LADDERS	-	51921291	5,413.55
5200	PLATFORMS & LADDERS - ADDITIONAL	0 12/80	265 5990	PLATFORMS & LADDERS ADD	-	52884991	10,100.00
--1400	TRUCK RACK PLATFORMS	0 7/71	266 2520	T-4 & 5 TRUCK RACK	284	51921292	698.23
--1400	BULK RAILROAD LOADING SYSTEM	0 9/77	266 2550	RR LOADING SYS	275	52482610	4,391.10
--1400	LOADING DOCK ADJUSTABLE RAMP	0 9/81	266 2550	LOAD DOCK ADJ RAMP	-	52964838	5,040.00
--1400	TANK TRUCK LOADING	0 10/72	266 2550	TANK TRUCK LOADING	-	51921293	907.62
--1400	TANK TIEDOWNS	0 12/82	266 2550	TANK TIEDOWNS	-	53111592	3,018.00
--1400	TRUCK LOADING	0 11/74	266 2550	TRUCK LOADING	-	52265590	2,429.25
--1400	TRUCK LOADING STATION REVAMP	0 9/81	266 2550	TRUCK LOADING STATION REVAMP	-	52964839	1,300.00
--1400	INSTALL RR LOAD SYS	0 9/77	266 2551	RR SYS INSTALL	-	52482611	6,317.00

BPACC00081

**AMOCO CHEMICAL COMPANY - TORI JE POLYSTYRENE BATCH PLANT**

13

EQUIPMENT NO. S/N	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	RMG	ASSET NO	COST
	FLOOR SWEEPER, MANUAL PUSH	X	266 8600	MANUAL PUSH	WHS	-	600.00
TO-568	BOX, TOOL	X	266 9000	CRAFTSMAN, 20" x 7" x 4"	MNT	-	250.00
TO-569	BOX, TOOL	X	266 9000	CRAFTSMAN, 18" x 8" x 9"	MNT	-	250.00
TO-567	CART, TOOL	X	266 9000	2-DRAWER, 24" x 36"	MNT	-	380.00
	TOOL BOX	X	266 9000	HOMARK	-	-	250.00
5200	VENT, ROOF UNITS (4)	X 7/63	266 9950	ROOF VENTS	WHR	51921295	298.00
5200	VENT, ROOF, HARTZELL UNITS (2)	X 6/67	266 9950	ROOF VENTS	WHR	51921296	526.40
5200	VENTS FOR HARTZELL UNITS	X 5/69	266 9950	ROOF VENTS	WHR	51921297	139.01
--1500	PLANT AIR INSTALL	O 7/71	266 9951	INSTALL PLANT AIR	-	51921298	3,234.52
TO-572	DRILL, HAND	X	268 2750	BLACK & DECKER, 1/2"	MNT	-	150.00
TO-595	DRILL PRESS, 1/2" DELTA, SN # 138248	O 8/71	268 3910	DRILL PRESS, DELTA/ROCKWELL	MNT	51921118	500.00
TO-591	GRINDER, PEDESTAL, UTILITY, 2 hp	X	268 5180	UTILITY 2HP	MNT	-	1,750.00
TO-592	GRINDER, PEDESTAL, DAYTON, 3/4 hp	X	268 5180	DAYTON	MNT	-	450.00
	PNEUMATIC IMPACT HAMMER	X	268 6500	PHILLIPS	-	-	190.00
	LATHE, BOTWINIK BROS.	X	268 8490	BELT DRIVEN, BENCH	-	-	3,500.00
	BEARING HEATER	X	269 0700	BEARING HEATER	MNT	-	180.00
	DRILL, HAND 1/2"	X	269 2960	MILWAUKEE	-	-	150.00
TO-577	BAND SAW, 7" EMERSON, SN # 10-170 IU	O 8/71	269 3750	7" BAND SAW, JOHNSON	MNT	51921119	475.00
TO-574	CONCRETE SAW	X	269 4020	JEPSON, 1/2" MODEL # 2218	MNT	-	700.00
	CIRCULAR SAW	X	269 4060	BLACK & DECKER 6 1/2"	-	-	40.00
	CUT-OFF SAW	X	269 4790	BLACK & DECKER #3108	-	-	375.00
	JIG SAW	X	269 4790	BLACK & DECKER #7330	-	-	190.00
TO-575	SABRE SAW, HAND, BLACK & DECKER, # 7015T2	X	269 5050	SABRE SAW	MNT	-	95.00
	HAMMER, CHIPPING	X	269 5420	SIOUX	-	-	150.00
	HAMMER, CHIPPING	X	269 5420	DAYTON	-	-	150.00
TO-571	DIE AND TAP SET	X	269 6200	ACE #614	MNT	-	125.00

BPACC00082

**AMOCO CHEMICAL COMPANY - TORK .E POLYSTYRENE BATCH PLANT**

14

EQUIPMENT NO. SUB	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	QNT	ASSET NO	COST
TO-588	CUTTING TORCH SET, ACETYLENE	X 7/63	269 6640*	CUTTING TORCH SET	MNT	51921121	131.65
TO-587	PIPE VISE, RIGID # 40-A	X 7/63	269 7400*	PIPE VISE	MNT	51921122	37.00
	BENCH VISE	X	269 7520	COLUMBIAN 6"	-	-	450.00
	TABLE VISE	X	269 7520	COLUMBIA 8"	-	-	1,076.00
TO-585	WISE, BENCH, COLUMBIAN, 3-1/2"	X	269 7520	BENCH VISE	MNT	-	300.00
TO-584	WISE, DRILL PRESS, STANLEY 4"	X	269 7520	TABLE VISE	MNT	-	150.00
TO-586	WISE, BENCH, ATROL 4-1/2"	X	269 7520	BENCH VISE	MNT	-	350.00
TO-529	WELDER, LINCOLN, IDEARC # 250	X 11/70	269 7920*	WELDER, LINCOLN, AC-250	MNT	52339440	254.00
	ARC WELDING MACHINE	X 5/91	269 8060	MILLER	MNT	56019099	3,255.60
	IMPACT WRENCH	X	269 9570	BLACK & DECKER 1/2"	-	-	350.00
	ALIGNMENT KIT	X	269 9960	DAUPHIN VIBRALIGN	-	-	1,350.00
	AMMETER	X 12/91	269 9960	FLUKE MULTIMETER	-	-	204.00
	AMMETER	X	269 9960	ULTRA	-	-	60.00
	BARREL PUMP, HAND	O 4/81	269 9960	BARREL PUMP, HAND	MNT	52918723	45.10
	COME-ALONG, 2 TON, P-150	O 8/71	269 9960	COME-ALONG, 2 TON	MNT	51921124	30.38
	CORDLESS PIPE CLEANER	X	269 9960	RIGID 429A	BLO	-	250.00
	CURRENT TRACER	X 1/92	269 9960	PASAR # P23	-	-	452.07
	CUT OFF SAW, BLACK & DECKER	O 4/82	269 9960	CUT OFF SAW, BLACK & DECKER	MNT	53029669	142.20
	DIE GRINDER	X	269 9960	MILWAUKEE	-	-	250.00
	DIGITAL MANOMETER	X 12/91	269 9960	MANOMETER	MNT	-	450.00
	DRILL, HAND, VARI-SPEED, 3/8"	O --/79	269 9960	DRILL, HAND, 3/8"	MNT	52641640	49.44
	DRUM PUMPS (6)	X	269 9960	TUTHILL HAND-OP. ROTARY PUMP 1226R	MNT	-	75.00
	ELECTRIC INSULATION TESTER	X 12/91	269 9960	TIF MEGOMETER	-	-	168.94
TO-570	EXTRACTOR SET	X	269 9960	SCREW, BLUE POINT # 1020	MNT	-	40.00
TO-576	GREASE GUN, LINCOLN AIR, # 82716	X	269 9960	LINCOLN AIR	MNT	-	500.00
TO-590	GRINDER, HAND, BLACK & DECKER	X	269 9960	BLACK & DECKER	MNT	-	100.00

BPACC00082A

**AMOCO CHEMICAL COMPANY - TOR CE POLYSTYRENE BATCH PLANT**

15

EQUIPMENT NO. S/N	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	PMG	ASSET NO	COST
	MICROMETER SET	X	269 9960	FOWLER	-	-	500.00
TO-579	PIPE REAMER, RIGID	O	269 9960	PIPE REAMER	MNT	-	200.00
TO-581	PIPE THREADER, HAND, RIGID, 3/8", 1/2", 3/4", 1", & 2"	O	269 9960	PIPE THREADER, RIGID, 3/8"to 2"	MNT	-	250.00
	PORTABLE THERMOMETER	X 2/92	269 9960	RAYNGER TEMPMEETER # EPD ST-2	-	-	299.00
	SHEAR, CUTTING	X	269 9960	STANLEY	-	-	75.00
	SOLDERING GUN	X	269 9960	WELLER	-	-	30.00
	SPRAY GUN	O 7/81	269 9960	SPRAY GUN	MNT	52946626	48.95
	WRENCH, IMPACT, BLACK & DECKER	O --/80	269 9960	WRENCH, IMPACT, BLACK & DECKER	MNT	52844101	125.10
	DRUM TILTER	O 9/87	269 9980	DRUM TILTER		55383255	490.68
	DRUM TOOL	O 9/87	269 9980	DRUM TOOL		55383254	54.84
FE-1201 FE-1200	E-1305 VAPOR IN, EG&G FlowTech,S/N3201855,FT-32WENA-GEA-3 E-1305 COOLANT FLOW, Signet Scientific, 1-1/4"	M 01/91 N 01/91	269 9980	VAPORS TO E-1305	278 278	56019098	997.20
	MISC M & E	O 1/90	269 9980	MISC M & E		55773921	4,141.67
5800	MISC M & E	O 12/89	269 9980	MISC M & E		55758229	12,248.17
--5800	STORAGE SHED	O 12/90	269 9980	STORAGE SHED	-	55907402	4,793.51
S-1506	HEAT SHRINK GUN W/CART	O 11/72	269 9990	HEAT SHRINK GUN & CART	MNT	51921125	537.21
	MISC. M & E	O 12/91	296 9980	MOTOR & CONTROLLER	-	56019101	1,058.32
	WATER TEST WELLS, INSTALLATION	O 9/88	398 5571	WATER TEST WELLS, INSTALL	-	55581510	19,340.00
5800	45 KVA TRANSFORMER & PANEL (OFFICE)	O 8/71	400 0320	45 KVA TRANSFORMER (OFFICE)	238	51921311	1,221.09
--5800	AC/HTR- LUNCH ROOM	O 12/90	400 0320	AC/HTR UNIT - LUNCH ROOM	-	55907408	4,585.00
	ALARM PANEL	X 12/91	400 0320	PANALARM (PROVOX)	-	-	1,121.00
	ALARM PANEL	X 12/91	400 0320	PANALARM (PROCESS)	-	-	1,121.00
D-1602	BLOWDOWN TANK FOR REACTOR RUPTURE DISK , 8'D x 10'H	O 9/85	400 0320	BLOWDOWN TANK (RELOCATED 10/90)	262	53380456	3,514.00
	CABINET, PROVOX	X 12/91	400 0320	HOFFAM	-	-	7,253.00
	CABINET, PNEUMATIC INSTRUMENT	X 12/91	400 0320	RITTAL	-	-	6,292.00
S-1100	CIRC H.O. FILTER, Cartridge Type	O 10/90	400 0320	D-LINE H.O. FILTER	269	55879136	2,690.10
TCV-301	CONTROL VALVE TCV-301	X 7/69	400 0320	TCV-301 for R-301	258	52355164	1,081.30

BPACC00083

**AMOCO CHEMICAL COMPANY - TOR CE POLYSTYRENE BATCH PLANT**

16

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	PWG	ASSET NO	COST
--1600	CONTROL VALVES & REGULATORS	O 12/90	400 0320	CONTROL & REGULATOR VALVES	-	55907400	8,625.99
TIC 125	D-101 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOX OP. STATION #CD6201	253	-	485.00
LSH-101	D-101 LEVEL ALARM, Dyatrol	O 11/74	400 0320	D-101 LEVEL ALARM	253	51990195	1,339.05
LSH-102	D-102 LEVEL ALARM, Dyatrol	X 121/80	400 0320	D-102 LEVEL ALARM	253	52884923	495.87
TIC 315	D-301 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOX OP. STATION #CD6201	259	-	485.00
LSH-303	D-302 LEVEL ALARM, Dyatrol	O 11/74	400 0320	LEVEL ALARM	259	51990196	1,399.06
TIC 428	D-401 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOX OP. STATION #CD6201	263	-	485.00
LSH-402	D-401 LEVEL ALARM, Dynatron	O 10/81	400 0320	D-401 LEVEL ALARM	263	52975379	435.05
--1400	FIREWALL STAIRWAYS	X 7/75	400 0320	FIREWALL STAIRWAYS	-	52419271	585.85
FE-1304	FLOW METER, XOTechnology, S/N202477, 2" Model:RT100-1-1	N 10/90	400 0320	FLOW METER, FE-1304	275	55879137	w/FE-1300
FI-1305	Remote Read Out at A & C Line	N 10/90	400 0320	FLOW INDICATOR, FI-1305	258	55879137	w/FE-1300
FI-1306	Remote Read Out at D Line	N 10/90	400 0320	FLOW INDICATOR, FI-1306	262	55879137	w/FE-1300
FE-1300	FLOWMETER, XOTechnology, S/N201945, 2", Model:RT100-1-1	O 10/90	400 0320	P-1311 FLOW METER	275	55879137	8,499.46
FE-1301	FLOWMETER, XOTechnology, S/N201943, 2", Model:RT100-1-1	O 10/90	w/FE-1300	FE-1301 FLOW METER	275	w/FE-1300	
	FOXBORO GAS ANALYSER, MODEL OVA 108	O 10/90	400 0320	ORGANIC GAS ANALYSER	-	55879129	7,230.97
5800	INSTRUMENT MODIFY, CONT PANEL	O 9/81	400 0320	CONT PANEL MODIFY	-	52992840	2,002.76
5800	INSTRUMENT CONTROL PANEL	O 7/71	400 0320	CONT PANEL INSTRUMENTS	-	51921312	2,365.10
	INSTRUMENT SHELF	X 12/91	400 0320	FOXBORO #102-5W	-	-	-
	INSTRUMENT SHELF	X 12/91	400 0320	FOXBORO #102-4W	-	-	-
--1600	INSTRUMENTATION & CONTROLS	O 2/77	400 0320	CONTROLS, PROCESS AREA	-	52419270	19,986.59
LI-1305	LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1301 LEVEL, Hg	276	51921318	224.61
LI-1304	LEVEL INDICATOR, Hg, Tank-O-Meter	O 5/72	400 0320	T-1302 LEVEL, Hg	276	51921314	187.00
LI-1309	LEVEL INDICATOR, Hg, Tank-O-Meter	X 3/74	400 0320	T-1314 LEVEL, Hg	276	-	225.00
LI-1307	LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1305 LEVEL, Hg	276	51921320	224.60
LI-1303	LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1303 LEVEL, Hg	276	51921317	224.61
LI-1308	LEVEL INDICATOR, Hg, Tank-O-Meter	O 5/72	400 0320	T-1304 LEVEL, Hg	276	51921315	186.99
LI-1306	LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1306 LEVEL, Hg	276	-	225.00
LI-1302	LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1307 LEVEL, Hg	276	51921316	227.34

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**AMOCO CHEMICAL COMPANY - TOR ICE POLYSTYRENE BATCH PLANT**

17

EQUIPMENT NO. S/F	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & P	SPECIFICATIONS	QMS	ASSET NO	COST
1,3,400	LOOP ISOLATOR (2)	X 12/91	400 0320	ACTION-PAK #4380-0000	-	-	-
	LOOP ISOLATOR (6)	X 12/91	400 0320	ANALOG DEVICES #2824B	-	-	-
	MECHANICAL SEALS	O 12/91	400 0320	HOT OIL & STYRENE PUMPS	250	56021794	24,815.84
	MECHANICAL SEALS, H.O. PUMPS (P-131,132,133,331,333,ECT)	O 10/90	400 0320	MECHANICAL SEALS FOR H.O. PUMPS	-	55879138	8,309.72
	MECHANICAL SEALS	O 12/91	400 0320	HOT OIL & STYRENE PUMPS	250	56021787	8,093.26
	MISCELLANEOUS INSTRUMENTATION	O 10/90	400 0320	MISC INSTRUMENTATION	-	55879139	9,570.29
	POWER SUPPLY	X 12/91	400 0320	TOPAZ #61106	-	-	-
	R-101 & 301 PROC CONTROL MODIFY	O 11/78	400 0320	R-101 & 301 CONTROL MODIFY		52600458	16,530.85
	R-101 CONTROL VALVE, TCV-105	X 7/69	400 0320	TCV-105	252	52355163	1,081.29
	R-101 & R-301 PROCESS CONTROL MODIFY (A & C LINES)	O 11/78	400 0320	A & C LINE PROC CONT MODIFY		52600458	6,530.XX
TIC 116	R-101 THERMOMETERS	X 7/63	400 0320	THERMOMETERS	252	51921300	228.20
	R-101 PRESSURE GAUGES, R-101	X 7/63	400 0320	PRESSURE GAUGES, R-101	252	51921299	108.12
	R-101 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOK OP. STATION #CD6201	252	-	485.00
	R-102 INSTRUMENTATION	O 4/81	400 0320	R-102 INSTRUMENTATION	252	52918724	13.60
TIC 112	R-102 INSTRUMENTATION	O 8/80	400 0320	R-102 INSTRUMENTATION	252	52884922	17,732.02
	R-102 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOK OP. STATION #CD6201	252	-	485.00
TIC 306	R-301 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOK OP. STATION #CD6201	258	-	485.00
	R-301 INSTRUMENTS, GAUGES	X 12/68	400 0320	INSTRUMENTS, R-301	258	51921301	572.18
TIC 406	R-401 & 402 INSTRUMENTS - PRESS GAUGES, REGULATORS	X 7/69	400 0320	INST-PI'S, PCV'S, ETC		52355161	916.62
	R-401 & 402 INSTRUMENTS - THERMOMETERS, GAUGES	O 7/69	400 0320	INST-GAUGES, TH'S, ETC		52355160	2,073.58
	R-401 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOK OP. STATION #CD6201	262	-	485.00
	R-402 TEMPERATURE CONTROLLER	X 12/91	400 0320	FISHER PROVOK OP. STATION #CD6201	262	-	485.00
--1600	REACTOR LOADING CONTROLS	O 9/78	400 0320	REACTOR LOADING CONTROLS	-	52584181	4,812.00
RD-402	-B RUPTURE DISC ASSEMBLY, D-401	O 10/87	400 0320	D-401 RUPTURE DISC ASSEMBLY	263	55425559	1,100.75
RD-102	-B RUPTURE DISC ASSEMBLY	O 10/87	400 0320	D-101 RUPTURE DISC ASSEMBLY	253	55425560	1,469.75
RD-403	-B RUPTURE DISC ASSEMBLY, D-402	O 10/87	400 0320	D-402 RUPTURE DISC ASSEMBLY	263	55425562	1,416.75

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**AMOCO CHEMICAL COMPANY - TOR ICE POLYSTYRENE BATCH PLANT**

18

EQUIPMENT NO. SUF	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C P	SPECIFICATIONS	DWG	ASSET NO	COST
RD-302 -B	RUPTURE DISC ASSEMBLY, C-302	O 10/87	400 0320	C-302 RUPTURE DISC ASSEMBLY	253	55425561	1,416.75
RD-101 -B	RUPTURE DISC ASSEMBLY, D-301	O 10/87	400 0320	D-301 RUPTURE DISC ASSEMBLY	259	55425558	1,100.75
	SERVICE TRANSFER STATION	X 12/91	400 0320	FISHER PROVOX OP. STATION #CD6201	-	-	485.00
LI-1300	T-1308 LEVEL INDICATOR, Hg, Tank-O-Meter	X 12/70	400 0320	T-1308 LEVEL INDICATOR, Hg	275	51921310	507.90
LI-1301	T-1309 LEVEL INDICATOR, Hg, Tank-O-Meter	O 3/74	400 0320	T-1309 LEVEL INDICATOR, Hg	275	51921319	224.60
TR-306	TEMPERATURE RECORDER	X 12/91	400 0320	FOXBORO #124-RE	-	-	-
TR-112	TEMPERATURE RECORDER	X 12/91	400 0320	FOXBORO #124-RE	-	-	-
TR-419	TEMPERATURE RECORDER	X 12/91	400 0320	FOXBORO #124-RE	-	-	-
TR-406	TEMPERATURE RECORDER	X 12/91	400 0320	FOXBORO #124-RE	-	-	-
TR-116	TEMPERATURE RECORDER	X 12/91	400 0320	FOXBORO #124-RE	-	-	-
TR-100	TEMPERATURE RECORDER T. R. JUNCTION BOX	X 12/91 X 12/91	400 0320 400 0320	METRASCOPE MS200 J-TYPE, #70337F	-	-	2,464.00
--1300	THERMOMETERS FOR 1300 SECTION	O 3/74	400 0320	SEC 1300 TH'S	-	51921321	198.89
	TOOLS, MISC	X 10/90	400 0320	TOOLS, MISC	-	55879123	3,169.62
	TRANSDUCER, E/I (9)	X 12/91	400 0320	TRANSMATION #610T	-	-	-
	TRANSDUCER, E/I (4)	X 12/91	400 0320	ACTION-PAK #4350-A001	-	-	-
	TRANSDUCER, I/P (10)	X 12/91	400 0320	MOORE #77-16	-	-	-
	TRANSDUCER, I/P (8)	X 12/91	400 0320	BELLOFRAM TYPE 1000	-	-	-
	INSTRUMENT MODIFY, A,C & HTRS	O 10/90	400 0321	A,C & HTRS INSTRUMENT MODIFY	-	55879135	4,400.00
	INSTRUMENT, PARTS	O 10/87	400 0329	INSTRUMENT PARTS	-	55425563	156.75
	INSTRUMENT, PARTS	O 10/87	400 0329	INSTRUMENT PARTS	-	55425564	156.75
5800	INSTRUMENT, FREIGHT	O 10/90	400 0329	INSTRUMENT FREIGHT	-	55879130	92.28
	B-1404 & 1405 PIPING	O 7/71	400 0340	BLEND SYS PIPING	282	51921331	16,137.30
5800	INSTRUMENTATION, CONTROL VALVE	O 12/88	400 0340	CONTROL VALVE	-	55622389	1,917.00
5800	MISCELLANEOUS	O 12/90	400 0340	MISC	-	55907401	108.21
	R-101 PIPING	O 7/63	400 0340	R-101 PIPING	252	51921324	5,172.13
	R-101 BLOCK VALVE, H.O.	X 7/71	400 0340	BLOCK VALVE, H.O.	252	51946985	1,263.46

BPACC00086



**AMOCO CHEMICAL COMPANY - TO: ICE POLYSTYRENE BATCH PLANT**

19

EQUIPMENT NO. SUB	DESCRIPTION OF EQUIPMENT	DATE ACCD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	DWG	ASSET NO	COST
	R-101 PIPING	O 7/63	400 0340	R-101 PIPING	252	51921325	9,577.97
	R-301 PIPING	X 12/68	400 0340	for R-301	258	51921327	1,084.03
	R-301 PIPING	O 12/68	400 0340	for R-301	258	51921326	9,368.79
	R-301 H.O. BLOCK VALVE	O 7/71	400 0340	BLOCK VALVE	258	51921333	1,745.11
	R-401 & 402 PIPING	O 12/69	400 0340	REACTORS R-401 & 402		51921328	19,604.04
	R-401 & 402 CONTROL MODIFY	O 11/78	400 0340	R-401 & 402 CONTROL MODIFY		52600459	16,530.85
P-1304/P-1308	STYRENE PUMP RELIEF LINE	O 12/91	400 0340	PRESSURE RELIEF LINE	276	56019095	1,166.94
	T-1308 PIPING	O 2/91	400 0340	PIPING FOR T-1308	275	-	812.79
R-101/R-301	TRANSFER LINE MODIFICATION	O 9/91	400 0340	INSULATION	250	56019108	5,518.55
R-101/R-301	TRANSFER LINE MODIFICATION	O 9/91	400 0340	MISCELLANEOUS	250	56019109	407.41
R-101/R-301	TRANSFER LINE MODIFICATION	O 9/91	400 0340	PIPING	250	56019107	48,007.39
--1400	PIPING, TRANSFER SYSTEM	O 5/73	400 0349	PIPING, TRANSFER SYS	-	51921341	5,483.16
--1400	TRANSFER SYSTEM	O 7/80	400 0349	TRANSFER SYSTEM	-	52809289	925.00
--1400	TRANSFER SYSTEM	O 10/79	400 0349	TRANSFER SYS	-	52682044	3,829.21
	B-1404 & 1405 STRUCTURAL	O 7/71	400 0680	BLEND SYS STRUCTURAL	282	51921347	5,266.80
	B-1404 & 1405 STRUCTURAL	O 7/71	400 0680	BLEND SYS STRUCTURAL	282	51921348	1,287.25
1600	CONC SLAB (OLD REGRIND)	X 7/71	400 0680	CONC SLAB	-	51921349	618.04
	PLATFORMS	O 1/91	400 0680	INSTALLATION OF NEW PLATFORMS	-	56021798	1,985.90
	R-101 STRUCTURAL	X 7/63	400 0680	R-101 STRUCTURAL	252	51921342	151.20
	R-101 STRUCTURAL	X 7/63	400 0680	R-101 STRUCTURAL	252	51921343	730.00
	R-301 STRUCTURAL	X 12/68	400 0680	for R-301	258	51921345	482.85
	R-301 STRUCTURAL	O 12/68	400 0680	Channel Plate for R-301	258	52355169	270.60
	R-401 & 402 STRUCTURAL	O 12/69	400 0680	REACTORS R-401 & 402		51921346	10,269.96
--1400	T-1404 STRUCTURAL	O 7/71	400 0680	T-1404 STRUCTURAL	-	51921350	3,149.00
	T-1405 STRUCTURAL	O 7/71	400 0680	T-1405 STRUCTURAL	-	51921351	3,149.00
T-1306	FEED PREP TANK, 10'D x 24'H	X 7/63	400 6070	T-1306	276	51921446	1,154.00
A-1302+MS	T-1306 TANK MIXER, Lightnin, 15.1" PROPELLER (SN 673356)	O 12/90	w/T-1306	T-1306 MIXER(A-1302)	276	w/T-1306	

BPACC00087

## AMOCO CHEMICAL COMPANY - TOI ICE POLYSTYRENE BATCH PLANT

20

EQUIPMENT NO. SUF	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	DWG	ASSET NO	COST
T-1305	MINERAL OIL TANK, 10'D x 18'H	X 7/63	400 6070	T-1305	276	51921445	1,154.00
	H-1102 PIPE INSULATION	O 4/80	408 8040	PIPE INSULATION		52751445	10,679.00
T-1304	FEED PREP TANK, 10'D x 18'H	X 7/63	410 0670	T-1304	276	51921444	1,154.00
D-1305	CONDENSATE RECEIVER	O	410 1010	18"Ø x 6'L T-T	278	-	700.00
E-1305(1603?)	CONDENSATE VAPOR CONDENSER, S&T, Holland, (SN 84-129)	O 5/85	410 1010	E-1603 ??, VAPOR CONDENSER	278	53347079	3,129.15
D-121 -B	DEVOLATILIZER CONDENSATE RECEIVER, 36"Ø x 6'-6" T-T	X 8/80	410 1010	D-121 DEVOL CONO DRUM	254	52884194	1,314.00
E-421	DEVOLATILIZER CONDENSER, S&T, 172 ft <sup>2</sup> , 31,500 Btu/hr	X 7/69	410 1010	DEVOL CONDENSER	264	52355170	1,738.62
E-321	DEVOLATILIZER CONDENSER, S&T, 172 ft <sup>2</sup> , 31,500 Btu/hr	X 12/68	410 1010	DEVOL CONDENSER	260	51921353	1,897.41
E-1404	AIR COOLER, X-Changer Inc, AL	M 10/90	410 1020	C-1402 BLOWER AIR COOLER	282	55879125	6,292.91
E-1404-EM	E-1404 AIR COOLER FAN MOTOR, 1/3 hp	M 10/90	410 1020	E-1404 AIR COOLER FAN MOTOR	282	w/E-1404	
E-131	R-101 OIL COOLER, 5,005 ft <sup>2</sup> , 575 M Btu/hr	O 7/63	410 1020	E-131 FIN FAN COOLER	252	51921355	7,902.00
E-131-EM(W)	E-131 FAN MOTOR(W), 5 hp, 1150 rpm	O 10/90	w/E-131	E-131 MOTOR(W)	252	w/E-131	
E-131-EM(E)	E-131 FAN MOTOR(E), 5 hp, 1150 rpm	O 10/90	w/E-131	E-131 MOTOR(E)	252	w/E-131	
E-331	R-102 OIL COOLER, 7,700 ft <sup>2</sup> , 875 M Btu/hr	O 12/68	410 1020	E-331 FIN FAN H.O. COOLER	258	51921356	5,439.59
E-331-EM(N)	E-331 FAN MOTOR(N), 5 hp, 1175 rpm	O 12/68	w/E-331	E-331 FAN MOTOR(N)	258	w/E-331	
E-331-EM(Mid)	E-331 FAN MOTOR(Mid), 5 hp, 1175 rpm	O 12/68	w/E-331	E-331 FAN MOTOR(Mid)	258	w/E-331	
E-331-EM(S)	E-331 FAN MOTOR(S), 5 hp, 1175 rpm	O 12/68	w/E-331	E-331 FAN MOTOR(S)	258	w/E-331	
E-132	R-102 OIL COOLER, 7,700 ft <sup>2</sup> , 875 M Btu/hr	O 8/80	410 1020	E-132 H.O. FIN FAN COOLER	252	52824195	4,936.74
E-132-EM(W)	E-132 FAN MOTOR(W), 5 hp, 1150 rpm	O 8/80	w/E-132	E-132 FAN MOTOR(W)	252	w/E-132	
E-132-EM(Mid)	E-132 FAN MOTOR(Mid), 5 hp, 1150 rpm	O 8/80	w/E-132	E-132 FAN MOTOR(Mid)	252	w/E-132	
E-132-EM(E)	E-132 FAN MOTOR(E), 5 hp, 1150 rpm	O 8/80	w/E-132	E-132 FAN MOTOR(E)	252	w/E-132	
E-431	R-401 OIL COOLER, 8,437 ft <sup>2</sup> , 875 M Btu/hr	O 7/69	410 1020	R-401 H.O. FIN FAN COOLER	262	52355171	3,275.53
E-431-EM	E-431 OIL COOLER FAN MOTOR, 5 hp, 1750 rpm	O 7/69	w/E-431	E-431 H.O. COOLER FAN MOTOR	262	w/E-431	
E-432	R-402 OIL COOLER, 8,437 ft <sup>2</sup> , 875 M Btu/hr	O 7/69	410 1020	R-402 H.O. FIN FAN COOLER	262	52355172	3,275.54
E-432-EM	E-432 OIL COOLER FAN MOTOR, 5 hp, 1750 rpm	O 7/69	w/E-432	E-432 H.O. COOLER FAN MOTOR	262	w/E-432	
	WATER COOLED BLOWER CHILLER	X 12/90	410 1020	X-CHANGER INC.	WHS	-	5,000.00
H-1102 -B	HOT OIL HEATER, Parker Boiler, MG, 4,985 M Btu/Hr, 688 ft <sub>2</sub>	O 7/71	410 2000	H-1102 HEATER	268	51921362	9,962.83
H-1101 -B	HOT OIL HEATER, Parker Boiler, MG, 4,985 M Btu/Hr, 688 ft <sub>2</sub>	O 7/63	410 2000	H-1101 HEATER	268	51921360	9,577.97
H-1103	HOT OIL HEATER, Parker Boiler, 4,980 M Btu/Hr, 688 ft <sup>2</sup>	O 7/69	410 2000	D-LINE HEATER	269	52355173	8,726.00
	H-1102 INSTALLATION	O 7/71	410 2001	H-1102 INSTALL		51921363	3,012.98
S-1100	INSTALL H.O. FILTER	O 10/90	410 2001	S-1100 INSTALL	269	55879128	3,587.53
	ADDITIONAL COSTS	O 10/90	410 2009	S-1100 ADDED COSTS	-	55879126	1,685.00

BPACC00088

**AMOCO CHEMICAL COMPANY - TOR /CE POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C D	SPECIFICATIONS	PWG	ASSET NO	COST
H-1101	DOOR	O 6/92	410 2009	REPLACEMENT DOOR H-1101	268	-	1,351.50
	FREIGHT	O 10/90	410 2009	S-1100 FREIGHT	-	55879127	99.61
H-1101	NEW BURNERS	O 6/92	410 2009	PARKER BOILER H-1101	268	-	26,954.25
E-1502	E-1502 COOLING TOWER, York Recold, YODF-3112	O	410 3110	E-1502 COOLING TOWER	294		4,714.00
E-1502-EM	E-1502 COOLING TOWER FAN MOTOR, 7.5 hp	O	W/E-1502	E-1502 COOLING TOWER FAN MOTOR	294	W/E-1502	
E-1502-EM	E-1502 CIRC PUMP, 3/4 hp	O	W/E-1502	E-1502 CIRC PUMP	294	W/E-1502	
S-1308	MAGNET FILTER (for Railroad Car Unloading)10"Ø w/3" in/out	X	410 3960	RR SIDING MAGNET	275	-	1,300.00
S-1305	MAGNET FILTER (for Railroad Car Unloading)10"Ø w/3" in/out	O 6/82	410 3960	RR SIDING MAGNET, S-1305	275	53044036	1,300.00
S-1307	MAGNET FILTER (for Railroad Car Unloading)10"Ø w/3" in/out	O 8/82	410 3960	RR SIDING MAGNET	275	53056570	250.00
A-1304+MS	T-1308 MIXER, Lightning, 21.7"Prop	O 12/70	410 4000	T-1308 MIXER	275	51921369	1,485.98
A-1304-EM	T-1308 MIXER MOTOR, 7½ hp, 280 rpm	O 12/70	W/A-1304	T-1308 MIXER MOTOR	275	W/A-1304	
A-1307+MS	TANK MIXER, Lightning, 15.1" PROPELLER (SN 7318135)	O 3/74	410 4000	T-1301 MIXER	276	51921372	1,122.65
A-1307-EM	A-1307 MIXER MOTOR, 3 hp	O 3/74	W/A-1307	A-1307 MIXER MOTOR	276	W/A-1307	
A-1308+MS	TANK MIXER, Lightning, 15.1" PROPELLER (SN 7318134)	X 3/74	410 4000	T-1303 MIXER	276	51921373	1,122.65
A-1308-EM	A-1308 MIXER MOTOR, 3 hp	X 3/74	W/A-1308	A-1308 MIXER MOTOR	276	W/A-1308	
A-1305+MS	TANK MIXER, Lightning, 15.1" PROPELLER (SN 721524)	O 5/72	410 4000	T-1304 MIXER	276	51921370	1,670.56
A-1305-EM	TANK MIXER MOTOR, 7½ hp, AllisChalmers	O 5/72	W/A-1305	A-1305 MIXER MOTOR	276	W/A-1305	
A-1306+MS	TANK MIXER, Lightning, 15.1" PROPELLER (SN 721525)	O 5/72	410 4000	T-1304 MIXER	276	51921371	1,670.56
A-1306-EM	A-1307 MIXER MOTOR, 7½ hp, US	O 5/72	W/A-1306	A-1306 MIXER MOTOR	276	W/A-1306	
	B-1404 & 1405 INSTALLATION	O 7/71	410 4001	BLEND SYS INSTALL	282	51921377	29,343.00
	T-1301 MIXER INSTALL	O 3/74	410 4001	INSTALL MIXER	-	51921379	6,134.04
	T-1302 MIXER INSTALL	O 5/72	410 4001	INSTALL MIX	-	51921374	226.67
	T-1303 MIXER INSTALL	O 3/74	410 4001	INSTALL MIXER	276	51921378	6,134.04
	T-1304 MIXER INSTALL	O 5/72	410 4001	INSTALL MIX	-	51921375	226.68
D-1502	AIR DRYER	O 8/79	410 4030	E-1502 AIR DRYER FOR PLANT AIR	289	52669388	3,871.87
	AIR DRYER REFRIG MOTOR, 2 hp	O 8/79	W/C-1502	C-1502 COMP MOTOR	289	W/C-1502	
	S-1401 INSTALL	O 11/72	410 4041	INSTALL S-1401	-	51921383	855.30
C-1508(A)	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600, w/1 hp motor	O 4/89	410 4050	A-LINE TEPKO (C8800364)	259	55658445	5,064.22
C-1508(D)	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600, w/1 hp motor	O 4/89	410 4050	D-LINE TEPKO (C8800366)	259	55658447	5,064.22
C-1508(C)	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600, w/1 hp motor	O 4/89	410 4050	C-LINE TEPKO (C8800365)	259	55658446	5,064.22

BPACC00089

**AMOCO CHEMICAL COMPANY - TOR 'CE POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	PAG	ASSET NO	COST
S-1506	SAND FILTER, Whittaker, Model: RCM 24241A	N	410 4050	S-1506 SAND FILTER	293	-	100.00
E-1503	BATH WATER CHILLER, York, LCHA20-46, 19.9 TONS (CM028073)	O 12/74	410 4200	E-1503 BATH WATER CHILLER	294	51946988	5,773.80
E-1503-EM	E-1503 COMPRESSOR MOTOR, 1 hp	O	W/E-1503	E-1503 COMPRESSOR MOTOR	294	W/E-1503	
E-1503-EM(1)	E-1503 CHILLER FAN MOTOR, 1/2 hp	O	W/E-1503	E-1503 CHILLER FAN MOTOR(1)	294	W/E-1503	
E-1503-EM(2)	E-1503 CHILLER FAN MOTOR, 1/2 hp	O	W/E-1503	E-1503 CHILLER FAN MOTOR(2)	294	W/E-1503	
E-1503-EM(3)	E-1503 CHILLER FAN MOTOR, 1/2 hp	O	W/E-1503	E-1503 CHILLER FAN MOTOR(3)	294	W/E-1503	
E-1503-EM(4)	E-1503 CHILLER FAN MOTOR, 1/2 hp	O	W/E-1503	E-1503 CHILLER FAN MOTOR(4)	294	W/E-1503	
E-1501	CHILLER WATER COOLING TOWER	O 5/89	410 4200	WATERBATH COOLING TOWER	-	55663314	10,448.20
E-1202	CHILLER, 10 TON	X 12/78	410 4200	D-LINE CHILLER, 10 TON	273	52614863	9,816.44
E-1202-EM(C)	CHILLER COMPRESSOR MOTOR, 10 hp	X 12/78	W/E-1302	D-LINE CHILLER COMP MOTOR	273	W/E-1302	
E-1202-EM(F)	CHILLER FAN MOTOR, 2hp	X 12/78	W/E-1302	D-LINE CHILLER FAN MOTOR	273	W/E-1302	
E-1202-EM(P)	CHILLER PUMP MOTOR, 3 hp	X 12/78	W/E-1302	D-LINE CHILLER PUMP MOTOR	273	W/E-1302	
E-1204	CHILLER, Schreiber, S/N 933, 1 TON, Model 100AC	O	410 4200	E-1204 CHILLER	278	-	3,548.36
E-1204+EM	E-1204 CHILLER COMPRESSOR MOTOR, 1 hp	O	W/E-1204	E-1204 COMP MOTOR	278	W/E-1204	
E-1204+EM	E-1204 CHILLER PUMP MOTOR, 1 hp	O	W/E-1204	E-1204 PUMP MOTOR	278	W/E-1204	
E-1204+EM	E-1204 CHILLER FAN MOTOR, 0.20 hp	O	W/E-1204	E-1204 FAN MOTOR	278	W/E-1204	
E-1201 -C	CHILLER, Schreiber, 10 TON	O 7/69	410 4200	A & C LINE CHILLER w/MOTORS	273	52975381	12,351.20
E-1201-EM(C1)	E-1201 CHILLER COMPRESSOR MOTOR (1), 5 hp	O 7/69	W/E-1201	A & C LINE CHILLER COMP MOTOR(1)	273	W/E-1201	
E-1201-EM(C2)	E-1201 CHILLER COMPRESSOR MOTOR (2), 5 hp	O 7/69	W/E-1201	A & C LINE CHILLER COMP MOTOR(2)	273	W/E-1201	
E-1201-EM(F1)	E-1201 CHILLER FAN MOTOR (1), 3/4 hp	O 7/69	410 4200	A & C LINE CHILLER FAN MOTORS(1)	273	W/E-1201	
E-1201+EM(F2)	E-1201 CHILLER FAN MOTOR (2), 3/4 hp	O 7/69	410 4200	A & C LINE CHILLER FAN MOTORS(2)	273	W/E-1201	
E-1201+EM(P1)	E-1201 CHILLER PUMP MOTOR (1), 5 hp	O 7/69	410 4200	A & C LINE CHILLER PUMP MOTOR(1)	273	W/E-1201	
E-1201+EM(P2)	E-1201 CHILLER PUMP MOTOR (2), 5 hp	O 7/69	410 4200	A & C LINE CHILLER PUMP MOTOR(2)	273	W/E-1201	
E-1203	CHILLER, Schreiber, S/N 1242, 3 TON, Model 300AC	O 5/85	410 4200	E-1203 CHILLER	278	53347080	3,414.50
E-1203+EM	E-1203 CHILLER COMPRESSOR MOTOR, 3 hp	O	W/E-1203	E-1203 COMPRESSOR MOTOR	278	W/E-1203	
E-1203+EM	E-1203 CHILLER FAN MOTOR, 3/4 hp	O	W/E-1203	E-1203 FAN MOTOR	278	W/E-1203	
E-1203+EM	E-1203 CHILLER PUMP MOTOR, 1 hp	O	W/E-1203	E-1203 PUMP MOTOR	278	W/E-1203	
	PIPE & ELECT BATH SYS WATER	O 12/74	410 4201	WATER PIPE & ELECT	-	51946989	21,411.30
S-305	C-LINE VIBRATING SCREEN, Witte Model 242-D	O 10/77	410 4210	SCREEN VIBRATOR	259	52496997	2,650.00
S-405-EM -B	S-405 VIBRATOR MOTOR, 3/4 hp	O 10/81	410 4210	S-405 SCREEN VIB MOTOR	263	52975382	110.35
X-120	SCREEN CHANGER w/Hydraulics	O 7/71	410 4210	SCREEN CHANGER	253	51921391	13,917.71
X-420	SCREEN CHANGER w/DIE HEADS, Elect Panel & Hydraulics	O 7/69	410 4210	CHANGER ASSEMBLY	263	52355176	13,991.11
X-320	SCREEN CHANGER w/DIE HEADS, Elect & Hydraulics	O 7/70	410 4210	SCREEN CHANGE ASSEM	259	51946990	20,862.73
M-995	SHAKER, Tyler, MODEL RX-24	X 2/69	410 4210	LAB SHAKER	LAB	52116092	129.50
S-7777	PORTABLE SIEVE	O 12/88	410 4210	PORTABLE SIEVE	-	55622391	312.95
M-401	STRAND DIE HEAD	O ?	410 4210	X-420 STRAND DIE HEAD	263	-	W/X-420
S-405	VIBRATING SCREEN, Witte Model 242-D	O 7/71	410 4210	S-405 SCREEN, D-LINE	263	52116101	3,749.00

BPACC00090

## AMOCO CHEMICAL COMPANY - TORR JE POLYSTYRENE BATCH PLANT

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EQUIPMENT NO. REF	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C R	SPECIFICATIONS	PAG	ASSET NO	COST
S-105	VIBRATOR SCREEN, 42"W x 56"L, Witte:242-D w/Vibrator	0 8/80	410 4210	S-105, A-LINE SCREEN w/VIB	253	52824196	13,383.23
S-105-EM	S-105 MOTOR, 1.5 hp	0 8/80	w/S-105	S-105 SCREEN MOTOR	253	w/S-105	
A-116	TUMBLER, BARREL, SS, Belt Drive, 33"D x 36"L	0 8/80	w/S-105	A-116 BLEND DRUM	253	w/S-105	
A-116-EM	A-116 TUMBLER MOTOR, 3/4 hp, 1725 rpm	0 7/63	w/A-116	A-116 MOTOR	253	w/A-116	
M-101	X-120 STRAND DIE HEAD, w/20 Amp Elect Htrs	0 7/71	410 4210	DIE HEAD w/HTRS	253	52116118	2,575.00
M-301	X-320 STRAND DIE HEADS w/ELECT	0	410 4210	M-301, X-320 DIE HEAD	259	-	w/X-320
	X-120 INSTALLATION	0 7/71	410 4211	X-102 INSTALL		51921392	1,390.22
	X-120 INSULATION	0 7/71	410 4219	X-102 INSUL		51921393	262.62
	S-405 INSTALLATION	0 7/71	410 4221	INSTALL SCREEN		51921394	789.48
	G-110-C ADDED EQUIP	0 12/80	410 4460	G-110-C ADDED EQUIP	253	52884924	589.17
	G-110-C ADDED EQUIP	0 12/80	410 4460	G-110-C ADDED EQUIP	253	52918725	4,085.84
G-310+VS -B	PELLETIZER, CUMBERLAND, 8", Helic Knives	0 12/89	410 4460	PELLETIZER, CUMBERLAND	263	55758228	31,280.14
G-110 -C	PELLETIZER, 48 knife Helical	0 8/80	410 4460	PELLETIZER C-LINE	253	52824197	31,523.11
G-110+VS-EM	G-110-C VARI-SPEED & MOTOR, 15 hp	0 8/80	w/G-110	G-110 MOTOR	253	w/G-110	
G-410+VS -B	PELLETIZER, 14" Cumberland w/Vari-Drive	0 7/87	410 4460	PELLETIZER, D LINE	263	55349772	58,939.25
G-410-EM -A	PELLETIZER G-410 MOTOR, 15 hp	0 7/87	w/G-410	D-LINE PELLETIZER MOTOR	263	w/G-410-A	
	G-410 INSTALL	0 7/87	410 4461	G-410 INSTALL	-	55349773	2,050.82
	HOIST ELECT	0 10/82	410 4469	HOIST, ELECT		53076805	350.65
S-1401	DUST COLLECTOR, Semco, 3'00 x 4'H+COME, Pneumatic	0 11/72	410 4570	BLEND & HOLD TKS DUST COLLECTOR	282	52116117	2,933.99
R-101	REACTOR, w/H.O. Internals, 6'-1 1/2"IDx18'-9 1/2" S-S	0 7/63	410 5000	REACTOR, R-101	252	52438759	18,728.90
R-102	REACTOR, Insulated, H.O. Internals, 6'-1 1/2"IDx25'-2 1/2" T-T	0 8/80	410 5000	R-102 REACTOR	252	52884198	22,175.00
R-301	REACTOR, w/H.O. Internals, 6'-1 1/2"IDx25'-2 1/2" T-T	0 12/68	410 5000	REACTOR, R-301	258	52116121	63,658.90
R-401	REACTOR w/H.O. Internals, 6'-1 1/2"IDx25'-2 1/2" T-T	0 7/69	410 5000	REACTOR 4, "D" LINE	262	52355178	36,653.80
	D-1602 INSTALL	0 12/90	410 5009	BLOWDOWN DRUM INSTALL	-	55907390	12,445.56
D1310/D1312	OVERFLOW WEIGH SYSTEM	0 1/91	410 5009	SENSORTRONICS MODEL 65016	250	56019089	10,495.00
D1310/D1312	OVERFLOW WEIGH SYSTEM	0 1/91	410 5009	MISCELLANEOUS	250	55924939	1,236.95
	R-101 MISCELLANEOUS EQUIP	X 7/63	410 5009	F/A D-101	252	52265594	131.32
	R-102 MISCELLANEOUS EQUIP	0 4/81	410 5009	F/A-LINE R-102	252	52918726	5,200.00
	R-102 MISCELLANEOUS EQUIP	0 12/80	410 5009	F/A LINE R-102	252	52884925	25,743.60

BPACC00091

**AMOCO CHEMICAL COMPANY - TO: NCE POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACSD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	QMS	ASSET NO	COST
	R-301 MISCELLANEOUS EQUIP	O 12/68	410 5009	for R-301	258	52265584	14,410.90
	R-401 & 402 MISCELLANEOUS	X 7/69	410 5009	MISC D LINE EQUIP		52438762	1,991.34
	R-101 INSULATION	O 7/63	410 5020	R-101 INSULATION	252	52438761	4,052.30
	R-102 INSULATION	X 8/80	410 5020	R-102 INSULATION	252	52884926	41,629.08
	R-102 INSTALLATION	O 12/80	410 5021	R-102 INSTALLATION	252	52884927	122,127.89
	R-102 INSTALLATION	O 4/81	410 5021	R-102 INSTALLATION	252	52918727	352.63
	R-401 & 402 INSTALLATION	O 7/69	410 5021	REACTORS R-401 & 402		52355180	3,888.54
	R-401 & 402 INSTALLATION	O 12/69	410 5021	REACTORS R-401 & 402		51926991	120,954.25
	R-401 & 402 INSULATION	O 12/71	410 5021	REACTORS R-401 & 402		51921409	10,980.90
	R-401 & 402 INSTALLATION	O 7/71	410 5021	REACTORS R-401 & 402		52265581	7,761.56
D-402	DEVOLATILIZER, Insulated, Jacketed, 4'ID x 4'-0" T-T	O 7/69	410 5500	DEVOL, D-LINE	263	52355183	3,390.00
D-421	DEVOLATILIZER CONDENSATE RECEIVER, 36"ID x 8'-0" T-T	X 7/69	410 5500	DEVOL COND REC	264	52355184	615.00
D-302	DEVOLATILIZER, Insulated, Jacketed, 4'ID x 7'-0" T-T	O 12/68	410 5500	DEVOL TANK, D-302	259	51921416	4,974.59
D-321	DEVOLATILIZER CONDENSATE RECEIVER, 36"ID x 6'-6" T-T	X 12/68	410 5500	COND RECEIVER	260	51921417	672.08
T-1501	EVAPORATOR BASIN	O 1/82	410 5500	EVAPORATOR BASIN		53011415	1,975.00
D-301	HOLDING TANK, Insulated, Jacketed, 7'-6"ID x 18'-9" T-T	O 12/68	410 5500	HOLD TANK, D-301	259	51921415	8,788.35
D-401	HOLDING TANK, Insulated, Jacketed, 7'-6"ID x 18'-9" T-T	O 7/69	410 5500	D-401 HOLD TANK	263	52355182	7,940.00
D-1101	HOT OIL EXPANSION TANK, A & C-LINE, 4'D x 8' T-T	X 7/63	410 5500	D-1101, H.O. EXP TK	268	52116137	880.00
D-1102	HOT OIL EXPANSION TANK, D-LINE, 4'D x 12' T-T	X 7/69	410 5500	D-LINE H.O.EXPAN TK	269	52355185	615.00
R-402	REACTOR w/H.O. Internals, 6'-11"IDx25'-24" T-T	O 7/69	410 5500	REACTOR 5, "MD" LINE	262	52355179	33,473.80
A-416	TUMBLER, BARREL, SS, Belt Drive, 33"ID x 36"L	O 7/69	410 5500	D-LINE TUMBLER	263	52355181	2,101.39
A-416-EM	A-416, D-LINE TUMBLER MOTOR, 3/4 hp	O 7/69	w/A-416	A-416 TUMBLER MOTOR	263	w/A-416	
	D-102 MODIFY	X 12/80	410 5509	MODIFY D-102-B	252	52884929	8,090.00
	S-105 MODIFY HOPPER	O 12/80	410 5509	S-105 HOPPER MODIFY	253	52884928	343.00
E-121 -B	DEVOLATILIZER CONDENSER, S & T, 172 ft <sup>2</sup> , 31,500 Btu/hr	X 8/80	410 5550	E-121 DEVOL CONDENSER	254	52824199	785.00
F-411+VS	WAX FEEDER, w/Auger Feeder w/Vari-Drive	X 7/69	410 5630	WAX FEED D LINE	263	52355186	1,098.00
F-411-EM	WAX FEEDER F-411 MOTOR, 1/2 hp	X 7/69	w/F-411	F-411 WAX FEED MOTOR	263	w/F-411	

BPACC00092

**AMOCO CHEMICAL COMPANY - TORI 1E POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	DWG	ASSET NO	COST
F-311-VS-EM	WAX FEEDER, w/Auger Feeder, 1/12 hp Vari-Drive	O 10/77	w/F-311	C-LINE WAX FEED VARI-DRIVE & MOTOR	259	w/F-311	
F-111+VS	WAX FEEDER, Auger Feeder, w/Vari-Drive	X 7/63	410 5630	WAX FEED w/VARISPEED	253	52115103	880.00
F-111-EM	WAX FEEDER MOTOR, 1/12 hp	X 7/63	w/F-111	WAX FEED MOTOR	253	w/F-111	
	F-111 FEED BOX	O 12/80	410 5639	F-111 FEED BOX	253	52884930	117.75
D-102 -B	DEVOLATILIZER, Insulated, Jacketed, 4'ID x 7'-0" T-T	X 8/80	410 5670	DEVOL TANK, D-102	253	52824201	3,650.00
D-101 -B	HOLDING TANK, Insulated, Jacketed, 7'-6"ID x 18'-9" T-T	X 8/80	410 5670	HOLDING TANK, D-101	253	52824200	7,790.90
B-1405	BAGGING BIN, 60,000 #, 8'-6"OD x 24'+CONE	O 7/71	410 6000	BAGGING BIN	282	51921431	4,125.00
B-1404	BLENDING BIN, 60,000 #, 8'-6"OD x 24'+CONE	O 7/71	410 6000	BLENDING BIN	282	51921430	13,250.00
B-1402	HOLDING BIN # 1, 60,000 #, 8'-6"OD x 24'+CONE	O 7/69	410 6000	HOLDING BIN # 1	282	51921428	4,700.00
B-1403	HOLDING BIN # 2, 60,000 #, 8'-6"OD x 24'+CONE	O 7/71	410 6000	HOLDING BIN # 2	282	51921429	4,700.00
F-1415 -B	ROTARY VALVE FOR B-318	O 7/84	410 6050	B-318 ROTARY VALVE	259	52809292	1,345.64
F-1415-EM	F-1415 ROTARY VALVE MOTOR, 1/2 hp, 1800 rpm	O 7/84	w/T-1402	F-1415 ROTARY VALVE MOTOR	259	w/T-1402	
T-1401	SILO NO. 1, 118,000 #, 12'-4"OD x 24'+ CONE	O 5/69	410 6050	SILO NO. 1	283	52116132	16,573.60
F-1413	SILO # 1 ROTARY VALVE, Shick, T42G-1	O 5/69	w/SILO	T-1401 ROTARY VALVE	283	w/T-1401	
F-1413-GR	F-1413 ROTARY VALVE GEAR REDUCER	O 5/69	w/F-1413	F-1413 ROTARY VALVE GEAR REDUCER	283	w/F-1413	
F-1413-EM	F-1413 ROTARY VALVE MOTOR, 3/4 hp	O 5/69	w/F-1413	F-1413 ROTARY VALVE MOTOR	283	w/F-1413	
T-1408	SILO NO. 8, 12' OD x 35'H +CONE	O 9/81	410 6050	SILO NO 8	285	52964842	20,290.79
F-1423	T-1408 ROTARY VALVE	O		SILO 8 ROTARY VALVE	285	w/T-1408	
F-1423-EM	F-1423 ROTARY VALVE MOTOR, 1 hp, 1725 rpm	O	w/F-1423	F-1423 ROTARY VALVE MOTOR	285	w/F-1423	
	SILO DIVERter VALVE INSTALLATION	O 1/91	410 6050	DIVERter VALVES	283	56019094	98,169.80
T-1407	SILO NO. 7, 12' OD x 35'H + CONE	O 9/81	410 6050	SILO NO. 7	285	52964841	20,290.79
F-1422	T-1407 ROTARY VALVE	O		SILO 7 ROTARY VALVE	285	w/T-1407	
F-1422-EM	F-1422 ROTARY VALVE MOTOR, 1 hp, 1725 rpm	O	w/F-1422	F-1422 ROTARY VALVE MOTOR	285	w/F-1422	
	SILO DISTRIBUTION SYSTEM	O 1/91	410 6050	DIVERter VALVES	283	56021792	72,325.14
T-1403	SILO NO. 3, 300,000 #, 15'OD x 53'-0"H +45'CONE	O 12/70	410 6050	SILO NO. 3	284	52116134	27,970.71
F-1416	F-1416 BAGGER BIN, B-418, ROTARY VALVE	O	w/T-1403	F-1416 ROTARY VALVE	263	w/T-1403	
F-1416-EM	F-1416 ROTARY VALVE MOTOR, 1/2 hp, 1800 rpm	O	w/T-1403	F-1416 ROTARY VALVE MOTOR	263	w/T-1403	
C-1417	C-1417 BAGGER BIN TRANSFER BLOWER	O	w/T-1403	C-1417 BLOWER	263	w/T-1403	
C-1417-EM	C-1417 B-418 TRANSFER BLOWER MOTOR, 10 hp, 1750 rpm	O	w/T-1403	C-1417 BLOWER MOTOR	263	w/T-1403	
F-1418	T-1403 ROTARY VALVE, Model 685F, 21 rpm	O 12/70	w/T-1403	T-1403 ROTARY VALVE	284	w/T-1403	
F-1418-EM	F-1418 ROTARY VALVE MOTOR, 3/4 hp, 1725 rpm	O 12/70	w/F-1418	F-1418 ROTARY VALVE MOTOR	284	w/F-1418	
T-1406	SILO NO. 6, 300,000 #, 15'OD x 53'-0"H +45'CONE	O 5/78	410 6050	SILO NO. 6	285	52556328	25,864.57
F-1421	T-1406 ROTARY VALVE, Semco	O		F-1421, SILO 6 ROTARY VALVE	285	w/T-1406	
F-1421-EM	F-1421 ROTARY VALVE MOTOR, 1 hp, 1710 rpm	O	w/F-1421	F-1421 ROTARY VALVE MOTOR	285	w/F-1421	
T-1402	SILO NO. 2, 300,000 #, 15'OD x 53'-0"H +45'CONE	O 12/70	410 6050	SILO NO. 2	284	52116133	27,970.72

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**AMOCO CHEMICAL COMPANY - TORBIC POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. S/E	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	QTY	ASSET NO	COST
F-1417-EM	F-1417 ROTARY VALVE MOTOR, 3/4 hp	0 12/70	w/F-1417	F-1417 ROTARY VALVE MOTOR	284	w/F-1417	
C-1414	BAGGER BIN TRANSFER BLOWER, Sutterbilt, 4-MF	0 ?	w/T-1402	BLOWER C-1414, A-LINE	253	w/T-1402	
C-1414-EM	C-1414 MOTOR, 10 hp, 1760 rpm	0 ?	w/C-1414	C-1414 MOTOR	253	w/C-1414	
C-1418	SILOS 2 & 3 BLOWER(Below #3), Sutorbilt, 6M-F	0 12/70	w/T-1402	C-1418, SILO 2 & 3 BLOWER	284	w/T-1402	
C-1418-EM	C-1418 BLOWER MOTOR, 25 hp, 1775 rpm	0 12/70	w/C-1418	C-1418 BLOWER MOTOR, 25 hp	284	w/C-1418	
T-1405	SILO NO. 5, 300,000 #, 15'00 x 53'-0" H +45° CONE	0 7/71	410 6050	SILO NO. 5	284	52116136	20,848.13
F-1420	T-1405 ROTARY VALVE, Model 685F, 21 rpm	0 12/70	w/T-1405	T-1405 ROTARY VALVE	284	w/T-1405	
F-1420-EM	F-1420 ROTARY VALVE MOTOR, 3/4 hp, 1800 rpm	0 12/70	w/F-1420	F-1420 ROTARY VALVE MOTOR	284	w/F-1420	
C-1419	SILOS 4 & 5 BLOWER(Below #4), Sutorbilt, 6M-B	0 12/70	w/T-1405	SILO 4 & 5 BLOWER	284	w/T-1405	
T-1404	SILO NO. 4, 300,000 #, 15'00 x 53'-0" H +45° CONE	0 7/71	410 6050	SILO NO. 4	284	52116135	20,848.12
F-1419	T-1404 ROTARY VALVE, Model 685F, 21 rpm	0 12/70	w/T-1404	T-1404 ROTARY VALVE	284	w/T-1404	
F-1419-EM	F-1419 ROTARY VALVE MOTOR, 3/4 hp, 1725 rpm	0 12/70	w/F-1419	F-1419 ROTARY VALVE MOTOR	284	w/F-1419	
F-101	TUMBLER HOPPER ROTARY VALVE	0 8/80	410 6050	F-101 ROTARY VALVE	253	52824202	1,915.03
F-101-EM	HOPPER ROTARY VALVE MOTOR, 1/2 hp Motor	0 8/80	w/F-101	F-101 MOTOR	253	w/F-101	
	T-1406 INSTALL	0 5/78	410 6051	T-1406 INSTALL	-	52556329	6,269.60
T-1314	CONDENSATE STORAGE TANK, 9'0" D x 15' H	X 7/63	410 6070	T-1314 CONDENSATE TANK	276	51921448	200.00
D-1410	DUST & FINES DRUM	0	410 6070	D-1410, DUST DRUM AT BLENDER	282	-	200.00
D-1501	EXP TANK	0 12/74	410 6070	D-1501 EXP TANK		51946992	1,142.85
T-1303	FEED PREP TANK, 10' D x 18' H	X 7/63	410 6070	T-1303	276	51921443	1,173.00
T-1307	FEED PREP TANK, 10' D x 24' H	X 7/63	410 6070	T-1307	276	51921447	1,200.00
A-1303+MS	T-1307 TANK MIXER, Lightnin, 15.1" PROPELLER (SN 673357)	0 12/90	w/T-1307	T-1307 MIXER	276	w/T-1307	
A-1303-EM	A-1303 TANK MIXER MOTOR, 3 hp	0 12/90	w/A-1303	A-1303 MIXER MOTOR	276	w/A-1303	
T-1302	FEED PREP TANK, 10' D x 18' H	X 7/63	410 6070	T-1302	276	51921442	1,154.00
T-1301	FEED PREP TANK, 10' D x 18' H	X 7/63	410 6070	T-1301	276	51921441	1,154.00
D-1103	HOT OIL MAKE-UP & OVER-FILL TANK w/Heat Coils, 6' D x 7' T-T	0 11/72	410 6070	H.O.OVERFLOW TANK	269	52116131	3,364.30
D-1104	MAKE-UP OIL DRUM, 30 gal	0 11/72	410 6070	D-1104 DRUM	269	52116125	195.00
D-1312	R-401 & R-402 OVERFLOW DRUM	X 7/63	410 6070	R-401 & R-402 OVERFLOW DRUM	262	52139405	250.00
D-1310	REACTOR OVERFILL RECEIVER POT, 24" D x 4' H	X 7/63	410 6070	OVERFLOW DRUM A & C LINE	252	52139404	141.40
T-1309	STYRENE STORAGE TANK, 50,000 gal, 20' D x 21' H	0 3/74	410 6070	T-1309 STYRENE TANK	275	51921452	3,223.13
T-1308	STYRENE STORAGE TANK, 30,000 gal, 15' D x 24' H	0 12/70	410 6070	T-1308, STYRENE STG	275	51921451	6,177.00
	T-1308 INSTALL TANK & MIXER	0 12/70	410 6070	INSTALL T-1308 w/MIXER		w/T-1308	
T-1315	ZINC MIXING TANK, Cone Bottom, 6'-6" D x 5' H	0 8/79	410 6070	T-1315, ZINC MIX TANK	275	52669389	2,793.93
A-1315	MIXER, Vertical w/Shaft, 10" Prop, 2 hp Motor	0 8/79		T-1315 MIXER	275	w/T-1315	
A-1315-EM	T-1315 MIXER MOTOR, 2 hp	0 8/79	w/A-1315	A-1315 MIXER MOTOR	275	w/T-1315	

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**AMOCO CHEMICAL COMPANY - TORME POLYSTYRENE BATCH PLANT**

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	DWG	ASSET NO	COST
	D-1103 INSTALLATION	0 11/72	410 6071	INSTALL D-1103		52438758	3,097.50
	T-1308 & 1309 INSTALLATION	0 12/70	410 6071	INSTALL T-8 & T-1304	-	51921453	7,912.25
	T-1309 INSTALL	0 3/74	410 6071	T-1309 INSTALL	-	51921454	14,385.67
--1300	CONCRETE SLAB FOR T-1314-A	0 6/88	410 6074	T-1314 SLAB	-	55534023	8,141.91
	D-1104 SUPPLY LINES PIPING	0 12/72	410 6079	D-1104 PIPING		51921455	876.68
LI-1311	T-1309 LEVEL INDICATOR, Tape	0 7/75	410 6079	T-1309 TAPE GAUGE	275	52436914	602.62
A-1309+MS	T-1309 MIXER, Lightning, 21.7" Prop	0 3/74	W/T-1309	T-1309 MIXER W/MS	275	W/T-1309	
A-1309-EM	T-1309 MIXER MOTOR, 7 1/2 hp, 280 rpm	0 3/74	W/T-1309	T-1309 MIXER MOTOR	275	W/T-1309	
	TANK GAUGE, T-1306	0 7/74	410 6079	T-1306 TANK GAUGE	276	52436913	602.63
B-418	BAGGER BIN, 6000 # Working Capacity	0 7/63	410 6080	BAGGER HOPPER	263	52265587	4,052.29
B-118	BAGGER BIN,	X 7/63	410 6080	BAGGER BIN, B-118	253	52116140	343.80
B-318	BAGGER BIN, 5000 # Working Capacity	0 12/68	410 6080	BIN, B-318	259	52116143	4,239.98
B-1601	FINES AND WASTE HOPPER	0 10/63	410 6080	FINES BAGGER HOPPER D-1601	-	52116142	2,050.00
	B-418 ALTERATIONS FOR BAGGER	0 11/74	410 6089	ALTER TO B-418		52265592	847.02
5800	NORTH TANK FARM CONCRETE PAD	X 10/90	410 6509	PAD NORTH TANK FARM		55879140	65,034.38
E-1504	HOT WATER HEATER	0 7/91	410 9360	STATE 120 GALLON	294	56019110	818.12
E-1504	HOT WATER HEATER INSTALLATION	0 7/91	410 9360	PIPING	294	56019100	3,241.46
	WATER HEATER	X	410 9360	NATIONAL 10 GALLON #NSG10	LAB	-	170.00
	WATER HEATER	X	410 9360	RICHMOND MISCER #8V40-2	LRM	-	250.00
	OIL SHED	X 7/71	411 5850	OIL SHED	250	52061555	2,000.00
	MAJOR SPARE PARTS	0 12/91	451 2670	VARI-DRIVE A & D LINE	MNT	56019096	9,647.39
	MAJOR SPARE PARTS	0 12/91	451 2670	GEAR PUMP	MNT	56019097	5,889.51
TO-528	HYDRAULIC PRESS, MUGIER, H 40-17	X 11/70	630 3380*	HYDRAULIC PRESS	MNT	52339441	916.30
S-101	LINE HOPPER w/Magnets	X 7/63	630 5030	S-101 MAGNET GRATE	253	52438757	139.70
S-401	LINE HOPPER w/Magnet Grate	0	630 5030	S-401 MAGNET GRATE	263	-	140.00
S-301	LINE HOPPER w/Magnet Grate	0	630 5030	C-LINE END OF LINE MAGNETS	259	-	140.00
M-319	BAGGER, STOKER w/AUGER	0 12/68	700 0320	BAGGER, B-301	259	52265589	2,438.53
M-319-EM	M-319 BAGGER MOTOR, 3 hp, 1750 rpm	0 12/68	W/M-319	M-319 BAGGER MOTOR	259	W/M-319	

BPACC00095

**AMOCO CHEMICAL COMPANY - TOF ICE POLYSTYRENE BATCH PLANT**

28

EQUIPMENT		DATE ACQD	ASSET LEDGER INFORMATION				
NO.	SUB		P & R	SPECIFICATIONS	DWG	ASSET NO	COST
M-419+EM	BAGGER, 12,000 lbs/hr, w/AUGER	X 7/69	700 0630	M-419 BAGGER w/AUGER	263	52355189	690.60
M-419-EM	M-419 BAGGER MOTOR, 2 hp, 1800 rpm	X 7/69	w/M-419	M-419 BAGGER MOTOR	263	w/M-419	
M-119	BAGGER, w/AUGER	O 7/63	700 0630	BAGGER w/Motor	253	52116141	2,057.06
M-119-EM	M-119 BAGGER MOTOR, 2 hp, 1800 rpm	O 7/63	w/M-119	M-119 BAGGER MOTOR	253	w/M-119	
M-1402	M-1402 BAGGER	O 7/71	700 0630	B-1405 BAGGER	282	52116145	2,840.00
M-1402-EM	M-1402 BAGGER MOTOR, 3 hp, 1800 rpm	O 7/71	w/M-1402	M-1402 BAGGER MOTOR	282	w/M-1402	
M-1403	B-1405 BAG SETTLER	O 7/71	700 0730	B-1405 BAG SETTLER	282	51921461	765.00
M-1403-EM	M-1403 BAG SETTLER MOTOR, 1/2 hp, 1725 rpm	O 7/71	w/M-1403	M-1403 BAG SETTLER MOTOR	282	w/M-1403	
M-318	B-318 BAGGER SETTLER	X 12/68	700 0730	BAG SETTLER, B-318	259	52265595	709.19
M-318+EM	BAGGER SETTLER MOTOR, 1/2 hp, 1800 rpm	X 12/68	w/M-318	BAG SETTLER FOR M-319	259	w/M-318	
M-118	BAGGER SETTLER	X 5/69	700 0730	BAG SETTLER	253	51921459	714.11
M-118-EM	BAGGER SETTLER MOTOR, 1/2 hp	X 5/69	w/M-118	BAG SETTLER MOTOR	253	w/M-118	
M-418	M-418 BAGGER SETTLER	O 7/69	700 0730	M-418 BAG SETTLER	263	52391009	2,589.11
M-418-EM	M-418 BAGGER SETTLER MOTOR, 1/2 hp	O 7/69	w/M-418	M-418 BAG SETTLER MOTOR	263	w/M-418	
M-1405	BAGGER & WEIGHER	O 12/91	700 0900	MHE AIR PACKER	WHS	56019092	11,245.00
	ALUMINIUM TUBE BAG	O 6/92	700 0909	NEW BAGGER PARTS	WHS	-	135.10
M-1405	BAGGER PARTS	O 6/92	700 0909	NEW BAGGER PARTS	WHS	-	1,054.20
	CONTROL PANEL ENCLOSURE	O 8/71	798 2025	CONTROL PANEL ENCLOSURE		51921475	846.27
TO-183	CLOCK, WALL, G.E. 12"	X	851 77	CLOCK, 12" GE	LAB	-	50.00
TO-214	CLOCK, WALL, G.E. 8"	X	851 77	CLOCK, 8" G.E.	PLT	-	30.00
	CLOCK, SETH-THOMAS, 12"	X	851 77	CLOCK, SETH-THOMAS, 12"	BLO	-	50.00
	CLOCK, SETH-THOMAS, 12"	X	851 77	CLOCK, SETH-THOMAS, 12"	MNT	-	50.00
	CLOCK, SETH-THOMAS, 12"	X	851 77	CLOCK, SETH-THOMAS, 12"	PEO	-	50.00
TO-148	CLOCK, WALL, G.E. 8"	X	851 77	CLOCK, G.E. 8"	LRM	-	30.00
TO-212	TABLE, DRAFTING	O	851 77	CHARTPAK/PICKET ULTIMA	PEO	-	350.00
TO-161	TRAY, LETTER, 2-TIER, TAN	O	851 77	TRAY	CR	-	20.00
TO-141	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	PSU	-	20.00
TO-144	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	OFF	-	20.00
TO-140	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	FO	-	20.00
TO-143	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	PEO	-	20.00

BPACC00096

**AMOCO CHEMICAL COMPANY - TOI NCE POLYSTYRENE BATCH PLANT**

29

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	DWG	ASSET NO	COST
TO-142	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	SO	-	20.00
TO-139	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	LAB	-	20.00
TO-145	TRAY, LETTER, 3-TIER, TAN	O	851 77	TRAY	TWX	-	20.00
TO-147	BULLETIN BOARD (Foreman Office)	X	851 0750	BULLETIN BOARD	OFF	-	50.00
	BULLETIN BOARD (Office)	X	851 0750	BULLETIN BOARD	FO	-	50.00
TO-185	BULLETIN BOARD (Plant)	X	851 0750	BULLETIN BOARD	PLT	-	50.00
	BULLETIN BOARD (Lunch Room)(2)	X 91	851 0750	BULLETIN BOARD	LRM	-	50.00
TO-156	BOOKCASE, STEEL, BLACK	X 12/70	851 0800	OFFICE BOOKCASE	PEO	51921030	137.80
TO-126	BOOKCASE, STEEL, BAMBOO	X 5/72	851 1000	OFFICE BOOKCASE	OFF	51921031	46.00
TO-123	CABINET, ECONOCASE SLIDING DOOR	X 4/72	851 1000	OFFICE CABINET	MTO	51921045	58.40
5100	CABINET, PAINT STG	O 10/80	851 1000	MAINT CABINET	MNT	52865689	384.51
TO-120	CABINET, 6 SHELVES, TAN	O --/71	851 1000	OFFICE CABINET	FLR	52629589	359.63
TO-121	CABINET, 6 SHELVES, TAN	O --/71	851 1000	OFFICE CABINET	FLR	w/TO-120	
TO-122	CABINET, 6 SHELVES, TAN (NO DOORS)	O --/71	851 1000	PLANT CABINET	MNT	w/TO-120	
TO-174	CABINET, METAL CLOSET, BLACK	X 10/68	851 1000	PLANT CABINET	PTL	51921043	44.00
	CABINET	X 12/88	851 1000	FIRE CABINET	-	55622390	393.54
TO-209	CABINET, 2-DOOR, TAN, 4'	X 12/67	851 1000	MAINT CABINET	CR	51921042	47.50
TO-208	CABINET-TABLE, STORAGE UNBIT TAN	X 7/63	851 1000	OFFICE CABINET	TWX	52061553	301.75
	CABINETS, STORAGE	O 10/90	851 1000	LAB CABINETS	-	55879124	1,581.00
	FILE, SINGLE, #3000 L W/LOCK	O --/75	851 1000	FILE, SINGLE UNIT	FO	52629592	35.04
F-0017	FILE, LETTER 4-DRAWER, COLE, Grey	X 12/71	851 1000	OFFICE FILE	FO	52465568	73.50
TO-173	FILE, CARD, 2-DRAWER	O	851 1000	FILE, 2+1-DRAWER CARD	FO	-	35.00
TO-117	FILE, LETTER 5-DRAWER, HOLGA, BROWN	X 7/68	851 1000	OFFICE FILE	OFF	51921035	90.28
TO-207	FILE, LETTER, 5-DRAWER, NORWALK	X 7/63	851 1000	MAINT FILE	MNT	51921034	78.50
	FILE, LETTER, 5-DRAWER, "S"	X 91	851 1000	OFFICE FILE "S", 5-DRAWER	SO	-	680.00
	FILE, SINGLE, #3000 L W/LOCK	O --/75	851 1000	FILE, SINGLE UNIT	FO	52629591	35.04
	FILE, SINGLE, #3000 L W/LOCK	O --/72	851 1000	FILE, SINGLE UNIT	FO	52629590	35.05

BPAC000097

**AMOCO CHEMICAL COMPANY - TOP ICE POLYSTYRENE BATCH PLANT**

30

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	DWG	ASSET NO	COST
TO-116	FILE, LETTER 5-DRAWER, HOLGA, BROWN	X 5/72	851 1000	OFFICE FILE	OFF	51921039	125.00
	FILE, DRAWINGS, 8-DRAWER, 4'x3'x4'	X 91	851 1000	FILE, DRAWING	MNT	-	530.00
TO-173	FILE, LETTER 4-DRAWER, COLE	X 7/68	851 1000	PLANT FILE	FO	51921036	90.27
TO-119	FILE, LETTER 5-DRAWER, NORWALK, TAN	X 7/63	851 1000	OFFICE FILE	PEO	51921032	78.50
TO-118	FILE, LETTER 5-DRAWER, BLACK	X 12/70	851 1000	OFFICE FILE	OFF	51921038	69.50
TO-154	FILE, LETTER 5-DRAWER, TORCO	X 11/69	851 1000	OFFICE FILE	PSU	51921037	49.95
	FILE, SINGLE, #3000 L W/LOCK	O --/75	851 1000	FILE, SINGLE UNIT	FO	52629593	35.04
TO-206	FILE, LETTER 5-DRAWER, NORWALK	X 7/63	851 1000	MAINT FILE	MNT	51921033	78.50
TO-202	CHAIR, SWIVEL ARM TAN	X 7/63	851 1300	MAINT OFFICE CHAIR	MNT	51921054	73.50
	CHAIR, SWIVEL, ORANGE	O --/75	851 1300	CHAIR, ORANGE SWIVEL	SO	52629595	30.00
TO-168	CHAIR, SIDE ARM, GREEN	X 12/70	851 1300	PLANT CHAIR	FO	51921063	35.80
TO-110	CHAIR, STRAIGHT BACK ARMLESS TAN	X 7/63	851 1300	OFFICE CHAIR	OFF	51921049	29.06
TO-151	CHAIR, STOOL TYPE, HI-BACK SWIVEL ROCKER BLACK	X 11/69	851 1300	OFFICE CHAIR	LAB	51921060	119.50
TO-108	CHAIR, SWIVEL ARM TAN	X 7/63	851 1300	OFFICE CHAIR	PEO	51921047	73.50
C-0025	CHAIR, SWIVEL, TAN	X 12/71	851 1300	PLANT CHAIR	MNT	52465576	54.00
	CHAIR, SWIVEL, GREEN	O --/75	851 1300	CHAIR, GREEN SWIVEL	FO	52629594	30.00
TO-249	CHAIR, JUDGES	X 5/89	851 1300	JUDGES CHAIR	PSU	55663315	319.50
TO-170	CHAIR, LOW-BACK SWIVEL TAN	X 5/64	851 1300	PLANT CHAIR	TWX	51921059	39.95
TO-112	CHAIR, SIDE ARM TAN	X 7/63	851 1300	OFFICE CHAIR	SO	51921051	33.75
TO-530/541	CHAIRS, METAL FOLDING, TAN (12)(5 FOUND/91)	O	851 1300	CHAIRS, FOLDING	var	-	60.00
M 224	CHAIRS, STACKING(Silver Frame)(9 found)	O 9/76	851 1300	OFFICE MU 12"	var	52465636	217.23
TO-159	TABLE, CUSTOMER, 70" WALNUT	X 5/72	851 1400	70" WALNUT OFFICE TABLE	LRM	51921066	17.10
TO-106	CREDENZA, 2-DRAWER BAMBOO	X 5/72	851 1700	OFFICE CREDENZA	TWX	51921067	154.80
TO-150	CREDENZA, 2-DRAWER BLACK	X 5/72	851 1700	OFFICE CREDENZA	SO	51921080	221.28
TO-103	DESK, SMALL STEEL BAMBOO	X 5/64	851 1800	OFFICE DESK	SO	51921072	84.70
TO-162	DESK, REGULAR STEEL TAN & BLACK	X 11/69	851 1800	PLANT DESK	FO	51921076	139.00
		X 12/71	851 1800	TWX DESK	FR	52465584	74.80

BPACC00098

**AMOCO CHEMICAL COMPANY - TOR CE POLYSTYRENE BATCH PLANT**

31

EQUIPMENT NO. SUB	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P E R	SPECIFICATIONS	DWG	ASSET NO	COST
TO-201	DESK, REGULAR STEEL TAN	X 7/63	851 1800	MAINT DESK	MNT	51921071	151.00
TO-166	DESK, STEEL STAND-UP # 5420	X 10/68	851 1800	PLANT DESK	PLT	51921074	59.00
TO-163	DESK, REGULAR STEEL	?	851 1800	PLANT (OPERATORS)	CR	-	140.00
TO-105	DESK, W/TYPEWRITER DRAWER, BAMBOO	X 5/72	851 1800	OFFICE DESK	TWX	51921079	213.78
TO-149	DESK, REGULAR STEEL BLACK	X 5/69	851 1800	OFFICE DESK	FO	51921075	150.00
TO-104	DESK, REGULAR STEEL BAMBOO	X 4/70	851 1800	OFFICE DESK	OFF	51921077	156.98
D-0003	DESK, 30"x60" METAL W/FORMICA TOP	X 10/63	851 1800	TWX DESK	TWX	51921082	159.00
TO-164	DESK, REGULAR STAND-UP	X 5/72	851 1800	PLANT DESK	CR	51921080	60.10
	LAMP, HAND UV, DUAL TUBE	X	851 2300	UV DUAL TUBE	LAB	-	300.00
TO-210	CABINET, 2-DOOR, TAN, 4'	X 10/68	851 2600	MAINT CABINET	CR	51921081	18.00
TO-192	LOCKERS, LYONS, 3-B LOCKER UNITS & 4 BENCHES	X 7/71	851 2600	CHANGE ROOM LOCKERS AND BENCHES	LRM	51921082	893.33
	PAINTING W/FRAME, 3'x5'	O --/76	851 2800	PAINTING, OFFICE	TWX	52629598	60.00
	PAINTING W/FRAME, 3'x5'	O --/76	851 2800	PAINTING, OFFICE	TWX	52629597	65.00
	PAINTING W/FRAME, 3'x5'	O --/76	851 2800	PAINTING, OFFICE	TWX	52629596	85.00
	SHELVING, OPEN, STORAGE ROOM	O --/71	851 3051	SHELVING, OPEN, STG RM	STG	52629599	150.00
	STAND, TV & VCR	O 2/79	851 3200	STAND, TV & VCR	OFF	52629601	90.00
TO-155	STAND, SMOKING, WALNUT TOP	X 1/68	851 3200	STAND SMOKING	PSU	51921086	35.00
TO-125	STAND, TYPEWRITER, WALNUT TOP	X 5/69	851 3200	OFFICE TYPEWRITER STAND	TWX	51921087	49.40
TO-124	STAND, COPY MACHINE, TAN	X 9/65	851 3200	OFFICE STAND	TWX	51921085	39.95
	CHAIRS, STACKING(Black Frame)(5)	X 91	851 3500	CHAIRS, STACKING (5)	var	-	165.00
TO-115	CLARIDGE SET, THREE (3) PIECES	X 5/72	851 3500	OFFICE CLARIDGE SET	OFF	51921065	358.00
M-243	TABLE, CONFERENCE	O 9/76	851 3500	OFFICE CLOE BT-6	MNT	52465637	118.06
	TABLE, CONFERENCE	X 91	851 3500	TABLE, CONFERENCE	LAB	-	220.00
M-242	TABLE, CONFERENCE	O 9/76	851 3500	OFFICE CLOE BT-6	LRM	52465638	118.07
TO-182	CLOCK, TIMER, AMANO	X 4/70	851 3520	PLANT # 15194	PLT	51921109	425.00
TO-158	WASTEBASKET W/LINER, BLACK	X 1/68	851 3900	WASTEBACKET, OFFICE	PSU	51921093	32.00
	CABINET, STORAGE 2-DOOR 4' (2)	X 12/90	853 1900	CABINET, STORAGE	FO OFF	55907407	181.46

BPACC000099

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**AMOCO CHEMICAL COMPANY - TORR JE POLYSTYRENE BATCH PLANT**

32

EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
	COMPUTER	0 6/92	853 1900	IBM 386 PC	OFF	-	1,125.70
	LIGHTING	0 12/91	853 1900	MISC. LIGHTING FIXTURES	250	56021789	741.53
	LIGHTING	0 12/91	853 1900	MISC. CONDUIT FOR PLANT LIGHTING	250	56021788	19,626.83
	COMPUTER PARTS	0 6/92	853 1909	MODEM	OFF	-	256.39
	SOFTWARE	0 6/92	853 1909	APM SOFTWARE	OFF	-	351.81
	PROJECTION SCREEN	X	854	KNOX MONITOR	LAB	-	180.00
	PROJECTOR, 3M, OVERHEAD, # M-585	0 --/78	854 3396	OVHD PROJECTOR, 3M	OFF	52629602	390.89
	TV, RCA	0 12/88	854 5300	TV	LRM	-	200.00
	TV, EMERSON	0 12/86	854 5300	EMERSON TV	OFF	55246581	198.97
	VIDEO RECORDER	0 12/86	854 5376	VIDEO TAPE RECORDER	OFF	-	174.00
	RADIO, SCAQMD COMMAND RECEIVER	0 --/78	858 4890	SCAQMD RADIO (Foreman Office)	FO	52629603	203.61
TO-138	RADIO, LLOYD'S AM/FM, BLACK	X	858 5970	RADIO	FO	-	25.00
	HOT PLATES (3)	X	863 3906	HOT PLATES	LAB	-	450.00
	MICROWAVE OVEN, Kenmore	X 91	863 5520	MICROWAVE OVEN, Kenmore	LRM	-	200.00
	REFRIGERATOR, SEARS	0 12/86	863 7355	SEARS REFRIGERATOR	LRM	55246582	420.25
TO-248	AIR CONDITIONER, SEARS (KENMORE?)	0 5/89	864 3954	AC UNIT (SEARS)	CR	55663312	455.82
--5100	AC UNIT (S/M 0592648452)	0 9/80	864 4926	AC UNIT (S/M 0592648452)	FO	52844100	339.95
--5100	AC UNIT (S/M NKMM1130656)	0 5/83	864 4997	AC UNIT (S/M NKMM1130656)	LRM	53150101	3,001.39
--5200	AC UNIT, HEATING & COOLING	0 1/82	864 4997	AC UNIT (HTG & CLG)	LAB	53011413	607.51
TO-135	MAILING MACHINE, HAND	X 9/65	870 8766	MAIL MACHINE #41-156	-	51921107	225.00
	STENCIL MACHINE	X	871	BRADLEY DIAGRAPH	BLO	-	100.00
	STENCIL MAKER	X	871	SCOTT	BLO	-	50.00
TO-134	SCALES, POSTAL OMCO	X 9/65	871 4800	POSTAL SCALES	-	51921108	29.95
TO-128	TYPEWRITER, IBM SELECTRIC, SN # 9630822	X 5/72	871 8082	IBM TYPEWRITER, #9630822	-	51921112	558.00
	COMPUTER SOFTWARE	0 12/90	872 1309	COMPUTER SUPPLIES	-	55911639	9,855.08
	COMPUTER MONITORS	0 12/90	872 1309	COMPUTER MONITORS	-	55911640	1,536.99

BPACC00100

## AMOCO CHEMICAL COMPANY - TOI ICE POLYSTYRENE BATCH PLANT

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EQUIPMENT NO. SUE	DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
			P & R	SPECIFICATIONS	DWG	ASSET NO	COST
LAB PC	COMPUTER PRINTER, LASER	0 12/90	872 1350	COMPUTER PRINTER, LASER PROFS	-	55907392	1,124.22
	COMPUTER DISPLAY TERMINAL, 1144836	0 12/84	872 1370	COMPUTER DISPLAY TERMINAL	TWX	53301373	4,596.30
	COMPUTER, PC, DELL SYS 200 (3019) w/HPLazerJetII	0 12/88	872 6711	COMPUTER, PC, DELL SYS 200	LAB	55622384	4,378.73
	COMPUTER PERSONAL, IBM 23-715ANMP	0 10/90	872 6711	COMPUTER PC, IBM 23-715ANMP	-	55879145	6,350.34
	COMPUTER PERSONAL, IBM 23-7282676	0 10/90	872 6711	COMPUTER PC, IBM 23-7282676	-	55879143	6,350.33
	COMPUTER PERSONAL, IBM 23-715ANBV	0 10/90	872 6711	COMPUTER PC, IBM 23-715ANBV	-	55879144	6,350.34
	COMPUTER PERSONAL, IBM 23-7282677	0 10/90	872 6711	COMPUTER PC, IBM 23-7282677	-	55879142	6,350.33
	COMPUTER PERSONAL, IBM 23-715AOSV	0 10/90	872 6711	COMPUTER PC, IBM 23-715AOSV	-	55879141	6,350.33
	COMPUTER MONITOR, NEC MULTISYNC II	0 12/88	872 6712	COMPUTER MONITOR, NEC MULTI SYNC II	OFF	55622386	273.00
	COMPUTER PRINTER, HP LASER JET II	0 12/88	872 6713	COMPUTER PRINTER, HP LASER JET II	OFF	55622385	2,529.00
TO-223	SOFTWARE	0 6/92	872 6719	IBM SOFTWARE	OFF	-	4,580.15
	CALCULATOR, CANON	X	881 2017	CANON	FO	-	130.00
	CALCULATOR, MONROE, MODEL 1430, SN # E248431	X 11/73	881 2048	CALCULATOR, MONROE, SN # E248431	-	51921102	646.00
	CALCULATOR, SHARP	X 1/87	881 2117	CALCULATOR, SHARP, S/N 53151171		55255156	100.01
	CALCULATOR, Sharp EL-1197 IV	X	881 2117	CALCULATOR, Sharp	LAB	-	100.00
	CALCULATOR, TEXAS INST	X	881 2125	TEXAS INST.	MNT	-	65.00
	COPIER	0 12/91	881 3462	MINOLTA EP 300	OFF	-	75.00
	MICROFLICHE READER	0 --/74	881 8870	MICROFLICHE READER	OFF	52957273	153.59
	MICROFLICHE READER (For Traffic)	0 --/79	881 8870	MICROFLICHE READER	OFF	52957274	170.06
	BOOKCASE, THREE SHELF (3)	X 12/90	886 5012	BOOKCASE, 3 SHELF	CR(2)	55907396	318.35
	CHAIR, GUEST (2)	Y 12/90	886 5012	CHAIR, GUEST (2)	PSU	55907394	172.44
	CHAIR, EXECUTIVE	Y 12/90	886 5012	CHAIR, EXEC	PSU	55907393	106.94
	DESK, SECRETARIAL, COMP VERSION	0 12/90	886 5012	DESK, SECRETARIAL	OFF	55907395	396.90
	DESKS, COMPUTER, TWO(2)	0 12/90	886 5012	DESKS, COMPUTER, (2)	PEO MNT	55907398	752.27
	SHELVES, TWO(2)(FOR COMP DESKS-ENGR & MAINT)	0 12/90	886 5012	SHELF, TWO(2)	PEO MNT	55907397	428.13
	TRUCK, PICKUP, FORD (06052)	0 7/89	906 4400	FORD PICKUP TRUCK	-	55684939	10,426.69
	RADIOS, MOTOROLA 461	0 5/92		SIX MOTOROLA HT400 FM RADIOS			

BPACC00101

**AMOCO CHEMICAL COMPANY - TOF ICE POLYSTYRENE BATCH PLANT**

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<u>EQUIPMENT</u> <u>NO.</u> <u>SUF</u>	<u>DESCRIPTION OF EQUIPMENT</u>	<u>DATE</u> <u>ACQD</u>	<u>ASSET LEDGER INFORMATION</u>			
			<u>P</u> <u>E</u> <u>R</u>	<u>SPECIFICATIONS</u>	<u>DWG</u>	<u>ASSET NO</u> <u>COST</u>
	RADIOS, BATTERY CHARGER	0 5/92		BATTERY CHARGER FOR MOTOROLA HFT600 RADIOS		
	TANK, POLYETHYLENE, 6000 GALLON	0 10/92		6000 GAL PE TANK FOR STORMWATER		3,290.00
	RADIOS, SPARE BATTERIES, ACCESSORIES	0 5/92		SPARE BATTERIES, CLIPS FOR HT600'S		840.00
	PUMP, SJE200 SUMP PUMP	0 9/92		SUMP PUMP FOR RAILSIDING SUMP		1,782.00
	INSTALL RR SIDING STORMWATER SYSTEM	0 11/92		STORMWATER COLLECTION SYSTEM		3,100.00
	BAGGER, PNEUMATIC	0 1/92		MHE MODEL 2010FF AIR PACKER		8,250.00
	BLOWER, FOR PNEUMATIC BAGGER	0 1/92		SUTORBILT BLOWER FOR AIR PACKER		2,995.00
						<hr/>
						GRAND TOTAL   \$4,019,640.54

BPACC00102



**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> NO. SUE		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACQD</u>
<b>SECTION 100 - A - LINE</b>				
3	R-101	REACTOR, Insulated, H.O. Internals	6'-1 1/2" ID x 18'-9 1/2" S-S	0 7/63
4				
5	TR-116	R-101 TEMP. RECORDER	Foxboro 124-RE	11/91
6				
7	TIC-116	R-101 TEMP. CONTROLLER	Fisher Provox CD6201	11/91
8				
9	P-101+GD	R-101 FORWARDING PUMP, w/GEAR DRIVE	10"Sq x 6"	0 7/63
10				
11	P-101+EM	R-101 FORWARDING PUMP w/MOTOR	7.5 hp, 1760 rpm	0 7/63
12				
13	P-131+HS	R-101 HOT OIL CIRCULATING PUMP, Dean Bros, R-454	6"x8"x12 1/2"-1600gpm@60ft.hd.	N 2/91
14				
15	P-131-EM	R-101 H.O. CIRC PUMP MOTOR	50 hp, 1770 rpm	???
16				
17	E-131	R-101 OIL COOLER, Fin Fan	5,005 ft <sup>2</sup> , 575 M Btu/hr	
18				
19	E-131-EM	E-131 FAN MOTOR	5 hp, TEFC	
20				
21	E-131-EM	E-131 FAN MOTOR	5 hp, TEFC	
22				
23	R-102	REACTOR, Insulated, H.O. Internals	6'-1 1/2" ID x 25'-2 1/2" T-T	
24				
25	TR-112	R-102 TEMP. RECORDER	Foxboro 124-RE	11/91
26				
27	TIC-112	R-102 TEMP. CONTROLLER	Fisher Provox CD6201	11/91
28				
29	P-102+VS	R-102 FORWARDING PUMP w/VARI DRIVE 25 rpm	10"Sq x 6"	
30				
31	P-102-EM	R-102 FORWARDING PUMP MOTOR	7.5 hp, 1760 rpm	
32				
33	P-132+HS	R-102 HOT OIL CIRCULATING PUMP, Dean Bros, R-454	6"x8"x12 1/2"-1600gpm@60ft.hd.	
34				
	P-132-EM	R-102 H.O. CIRC PUMP MOTOR	50 hp, 1770 rpm	
	E-132	R-102 OIL COOLER, Fin Fan	7,700 ft <sup>2</sup> , 875 M Btu/hr	
38				
39	E-132-EM	E-132 FAN MOTOR (A)	5 hp, TEFC	
40				
41	E-132-EM	E-132 FAN MOTOR (B)	5 hp, TEFC	
42				
43	E-132-EM	E-132 FAN MOTOR (C)	5 hp, TEFC	
44				
45	D-101	HOLDING TANK, Insulated, Jacketed	7'-6" ID x 18'-9" T-T	
46				
47	P-103	HOLDING TANK FORWARDING PUMP, Gear, 25 rpm	10"Sq x 6"	
48				
49	P-103-VS+EM	FORWARDING PUMP VARI DRIVE (Sterling) w/MOTOR	3 hp, 1800 rpm	
50				
51	P-133+HS	HOLDING TANK H.O. CIRC PUMP, Dean Bros, R-434	2"x3"x8 1/2"-150gpm@60 ft.hd.	
52				
53	P-131+EM	D-101 H.O. CIRC PUMP MOTOR	5 hp, 1750 rpm	
54				
55	D-102	DEVOLATILIZER, Insulated, Jacketed	4' ID x 7'-0" T-T	
56				
57	P-104	DEVOL FORWARDING PUMP	10"Sq x 6"	
58				
59	P-104-VS+EM	DEVOL FORWARDING PUMP GEAR DRIVE w/MOTOR	7.5 hp	
60				
61	X-120	SCREEN CHANGER w/DIE HEADS, Elect Panel & Hydraulics		
62				
63	C-1508A	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600	2600 cfm, 1 hp motor	
64				
65	E-108	WATER BATH, A-LINE		
66				
67	C-109+EM	WATER STRIPPER BLOWER, 3400 cfm, w/Motor	10 hp, 3400 rpm	
68				
	G-110+EM	PELLETIZER, 48 knife Helical	15 hp w/Vari-Drive	
	S-105+EM	VIBRATING SCREEN, 42"W x 30"L w/26"L, Witte Model 242-D	1.5 Vibrator Motor	
72				
73	F-111+EM	WAX FEEDER, w/Auger Feeder	1/20 hp Vari-Drive	
74				
75	A-116+EM	TUMBLER, BARREL, SS, w/Belt Drive Motor	33"Ø x 36"L, 3/4 hp	0 /63

**XI.E**

**BPACC00103**

**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> <u>NO</u> <u>SUF</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACCD</u>
	S-101+EM	LINE HOPPER w/Magnet Grate		
3	F-101+EM	S-101 PRODUCT FORWARDING VALVE w/Motor	1/2 hp, 29 rpm	
4				
5	C-116+EM	TRANSFER BLOWER for S-101, 200 cfm	2 hp	
6				
7	B-118	BAGGER BIN, 6000 # Working Capacity		
8				
9	M-119+EM	BAGGER, 12,000 lbs/hr, w/AUGER MOTOR	2 hp, 1800 rpm	
10				
11	M-119+EM	BAGGER SETTLER w/Motor	1/2 hp	
12				
13	M-121	PORTABLE PLATFORM SCALES		
14				
15	F-1404	BAGGER BIN, B-118, ROTARY VALVE w/Motor		
16				
17	C-1414+EM	BAGGER BIN TRANSFER BLOWER w/Motor		
18				
19	E-121	DEVOLATILIZER CONDENSER, Shell & Tube	172 ft <sup>2</sup> , 31,500 Btu/hr	
20				
21	D-121	DEVOLATILIZER CONDENSATE RECEIVER	36"Ø x 6'-6" T-T	
22				
23	P-1321+EM	DEVOL COND PUMP, Viking Gear, 1" x 1"	1 hp, 1710 rpm	
24				
25	P-124+EM	DEVOL VACUUM PUMP w/Motor, Leybold, SV180, 2"-180 cfm	7.5 hp	
26				
27		<u>SECTION 300      " C " LINE</u>		
28				
29	R-301	REACTOR, Insulated, H.O. Internals	6'-1 1/2" ID x 25'-2 1/2" T-T	
30				
31	TR-306	R-301 TEMP. RECORDER	Foxboro 124-RE	11/91
32				
33	TIC-306	R-301 TEMP. CONTROLLER	Fisher Provox CD6201	11/91
34				
	P-301+GD	R-301 FORWARDING PUMP w/25 rpm Gear Drive	10" Sq x 6"	
37				
38	P-301-EM	R-301 FORWARDING PUMP MOTOR	7.5 hp, 1760 rpm	
39				
40	P-331+MS	R-301 HOT OIL CIRC PUMP, Ingersol-Rand	6"x8"x12 1/2"-1600gpm@80ft.hd.	
41				
42	P-331-EM	R-301 H.O. CIRC PUMP MOTOR	50 hp, 1800 rpm	
43				
44	E-331	R-301 OIL COOLER, Fin Fan	7,700 ft <sup>2</sup> , 875 M Btu/hr	
45				
46	E-331-EM	E-331 FAN MOTOR (1)	5 hp, TEFC	
47				
48	E-331-EM	E-331 FAN MOTOR (2)	5 hp, TEFC	
49				
50	E-331-EM	E-331 FAN MOTOR (3)	5 hp, TEFC	
51				
52	D-301	HOLDING TANK, Insulated, Jacketed	7'-6" ID x 18'-9" T-T	
53				
54	P-303+VS	D-301 FORWARDING PUMP w/Sterling VARI-DRIVE	10" Sq x 6"	
55				
56	P-303-EM	FORWARDING PUMP MOTOR	3 hp, 1800 rpm	
57				
58	P-333+MS	HOLDING TANK H.O. CIRC PUMP, Dean Bros, R-434	2"x3"x8 1/2"-150gpm@60 ft.hd.	
59				
60	P-333-EM	D-301 H.O. CIRC PUMP MOTOR	5 hp, 1750 rpm	
61				
62	D-302	DEVOLATILIZER, Insulated, Jacketed	4' ID x 7'-0" T-T	
63				
64	P-304+VS	DEVOL FORWARDING PUMP w/Sterling VARI-DRIVE	10" Sq x 6"	
65				
66	P-304-EM	DEVOL FORWARDING PUMP MOTOR	7.5 hp	
67				
68	X-320	SCREEN CHANGER w/DIE HEADS, Elect Panel & Hydraulics		
	M-301	STRAND DIE HEAD	61 HOLES	
	C-15088	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600	2600 cfm, 1 hp motor	
72				
73	E-308	WATER BATH, C-LINE	20' L x 3' W x 9" D	
74				
75	C-309+EM	WATER STRIPPER BLOWER, 3400 cfm, w/Motor	10 hp, 3400 rpm	

BPACC00104

**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> <u>NO</u> <u>SUF</u>	<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACQD</u>	<u>A-</u> <u>DN</u>
G-310-VS+EM	PELLETIZER, Cumberland 8" w/Motor w/VARI-DRIVE	10 hp w/Vari-Drive		25
- S-305+EM	VIBRATING SCREEN, 42"W x 30"L w/26"U, Witte Model 242-D	1 hp Vibrator Motor		25
4 F-311+EM	WAX FEEDER, w/Auger Feeder	1/12 hp Vari-Drive		
6 S-301	LINE HOPPER w/Magnet Grate	1/2 hp, 29 rpm		
8 C-316+EM	TRANSFER BLOWER for S-101, 200 cfm	2 hp, 3500 rpm		
10 B-318	BAGGER BIN, 5000 # Working Capacity			
12 M-319+EM	BAGGER, STOKER w/AUGER MOTOR	3 hp, 1750 rpm		
14 M-318+EM	BAGGER SETTLER w/Motor	1/2 hp		
16 H-321	PORTABLE PLATFORM SCALES			
18 F-1415+EM	ROTARY VALVE, B-318, w/Motor	1/2 hp		
20 C-1416+EM	BAGGER BIN TRANSFER BLOWER w/Motor			
22 E-321	DEVOLATILIZER CONDENSER, Shell & Tube	172 ft <sup>2</sup> , 31,500 Btu/hr		25
24 D-321	DEVOLATILIZER CONDENSATE RECEIVER	36"O x 6'-6" T-T		25
26 P-1322+EM	DEVOL COND PUMP, Viking Gear, 1" x 1"	1 hp, 1710 rpm		25
28 P-324+EM	DEVOL VACUUM PUMP w/Motor, Leybold, SV180, 2"-180 cfm	7.5 hp		
30	<u>Section 1100 and 1300 Equipment Serving "A" and "C" Lines:</u>			
31				
32				
33 D-1310	REACTOR OVERFILL RECEIVER POT	24"O x 4'H		25
34 P-1301	D-1310 PUMP, Viking Gear	1" x 1"		25
- P-1301-EM	P-1301 PUMP MOTOR, Viking Gear,	1/2 hp		25
38 M-1301	D-1310 LOAD CELLS, Sensortronics, Model 65016	3000 # Capacity(Max)	12/90	25
40 D-1101	HOT OIL EXPANSION TANK, A, C-LINE	4'0 x 8' T-T		26
42 P-1101+EM	HOT OIL CIRC PUMP w/Motor	3"x4"x10", 20 hp@3530 rpm		
44 P-1102+EM	HOT OIL CIRC PUMP w/Motor	3"x4"x10", 20 hp@3530 rpm		
46 H-1101	HOT OIL HEATER, Parker Boiler, NG	5,000 M Btu/Hr, 688 ft <sub>2</sub>		26
48 H-1102	HOT OIL HEATER, Parker Boiler, NG	5,000 M Btu/Hr, 688 ft <sub>2</sub>		26
50 E-1201+EM	CHILLER, Schreiber w/2-1/2hp Fans, 2-5hp Comp, 2-5hp Pumps	10 TON		27
52				
53				
54	<u>SECTION 400 "D" LINE</u>			
55				
56 R-401	REACTOR, Insulated, H.O. Internals	6'-1 1/2" ID x 25'-2 1/2" T-T		26
57 TR-406	R-401 TEMP. RECORDER	Foxboro 124-RE	11/91	-
59 TIC-406	R-401 TEMP. CONTROLLER	Fisher Provox CD6201	11/91	-
61 P-401+GD	R-401 FORWARDING PUMP w/Gear Drive	10" Sq x 6"		26
63 P-401-EM	R-401 FORWARDING PUMP MOTOR	7.5 hp, 1760 rpm		26
65 P-431+MS	R-401 HOT OIL CIRCULATING PUMP, Dean Bros, R-454	6"x8"x12 1/2"-1600gpm@60ft.hd.		26
67 P-431-EM	R-401 H.O. CIRC PUMP MOTOR	50 hp, 1770 rpm		26
E-431	R-401 OIL COOLER, Fin Fan	8,437 ft <sup>2</sup> , 875 M Btu/hr		26
72 E-431-EM	E-431 FAN MOTOR	5 hp, TEFC		26
73 R-402	REACTOR, Insulated, H.O. Internals	6'-1 1/2" ID x 25'-2 1/2" T-T		26
74				
75				

BPACC00105

**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> <u>NO</u> <u>SUF</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACQD</u>
	TR-419	R-402 TEMP. RECORDER	Foxboro 124-RE	11/91
3	TIC-419	R-402 TEMP. CONTROLLER	Fisher Provox CD6201	11/91
4				
5	P-402+GD	R-402 FORWARDING PUMP w/25 rpm Gear Drive	10"Sq x 6"	
6				
7	P-402+EM	R-402 FORWARDING PUMP MOTOR	7.5 hp, 1760 rpm	
8				
9	P-432+MS	R-402 HOT OIL CIRCULATING PUMP, Dean Bros,R-454	6"x8"x12 1/4"-1600gpm@60ft.hd.	
10				
11	P-432-EM	R-402 H.O. CIRC PUMP MOTOR	50 hp, 1770 rpm	
12				
13	E-432	R-402 OIL COOLER, Fin Fan	8,437 ft <sup>2</sup> , 875 M Btu/hr	
14				
15	E-432-EM	E-432 FAN MOTOR	5 hp, TEFC	
16				
17	D-1312	R-401 & R-402 OVERFLOW DRUM		
18				
19	P-1303	D-1312 PUMP		
20				
21	M-1306	D-1312 LOAD CELLS, Sensortronics, Model 65016	3000 # Capacity(Max)	12/90
22				
23	D-401	HOLDING TANK, Insulated, Jacketed	7'-6"ID x 18'-9" T-T	
24				
25	P-403+VS	D-401 FORWARDING PUMP w/25 rpm VARI-DRIVE	10"Sq x 6"	
26				
27	P-403+EM	FORWARDING PUMP MOTOR	3 hp, 1800 rpm	
28				
29	P-433+MS	HOLDING TANK H.O. CIRC PUMP, Dean Bros,R-434	2"x3"x8 1/4"-150gpm@60 ft.hd.	
30				
31	P-433+EM	P-433 H.O. CIRC PUMP MOTOR	5 hp, 1750 rpm	
32				
33	D-402	DEVOLATILIZER, Insulated, Jacketed	4'ID x 7'-0" T-T	
34				
35	P-404+VS	DEVOL FORWARDING PUMP w/VARI-DRIVE	10"Sq x 6"	
36				
37	P-404+EM	DEVOL FORWARDING PUMP MOTOR	7.5 hp	
38				
39	X-420	SCREEN CHANGER w/DIE HEADS, Elect Panel & Hydraulics		
40				
41	M-401	STRAND DIE HEAD		
42				
43	C-1508C	ELECTROSTATIC PRECIPITATOR, Tepco Model T2600	2600 cfm, 1 hp motor	
44				
45	E-408	WATER BATH		
46				
47	C-409+EM	WATER STRIPPER BLOWER, 3400 cfm, w/Motor	10 hp, 3400 rpm	
48				
49	G-410-VS+EM	PELLETIZER, Cumberland 8"	15 hp w/Vari-Drive	
50				
51	S-405+EM	VIBRATING SCREEN, 42"W x 30"L w/26" L, Witte Model 242-D	1.5 Vibrator Motor	
52				
53	F-411+EM	WAX FEEDER, w/Auger Feeder	1/20 hp Vari-Drive	
54				
55	A-416+EM	TUMBLER, BARREL, SS, w/Belt Drive Motor	33"ID x 36"L, 3/4 hp	XX/63
56				
57	S-401+EM	LINE HOPPER w/Magnet Grate		
58				
59	F-1406+EM	PRODUCT FORWARDING VALVE w/Motor	1/2 hp, 29 rpm	
60				
61	C-416+EM	TRANSFER BLOWER for S-101, 200 cfm	2 hp	
62				
63	B-418	BAGGER BIN, 6000 # Working Capacity		
64				
65	M-419+EM	BAGGER, 12,000 lbs/hr, w/AUGER MOTOR	2 hp, 1800 rpm	
66				
67	M-418+EM	BAGGER SETTLER w/Motor	1/2 hp	
68				
69	M-421	PORTABLE PLATFORM SCALES		
70				
71	F-1416+EM	BAGGER BIN, B-118, ROTARY VALVE w/Motor		
72				
73	C-1417+EM	BAGGER BIN TRANSFER BLOWER w/Motor		
74				
75	E-421	DEVOLATILIZER CONDENSER, Shell & Tube	172 ft <sup>2</sup> , 31,500 Btu/hr	

BPACC00106

**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> <u>NO</u> <u>SUF</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACQD</u>
3	D-421	DEVOLATILIZER CONDENSATE RECEIVER	36"Ø x 8'-0" T-T	
4	P-1323+EM	DEVOL COND PUMP, Viking Gear, 1" x 1"	1 hp, 1710 rpm	
5	E-1202+EM	CHILLER w/10 hpCOMP, 2hp FAN, 3 hp PUMP	10 TON	
6	P-424+EM	DEVOL VACUUM PUMP w/Motor, Leybold, SV180, 2"-180 cfm	7.5 hp	
8	H-1103	HOT OIL HEATER, Parker Boiler	4,980 M Btu/Hr, 688 ft <sup>2</sup>	
10	D-1102	HOT OIL EXPANSION TANK, D-LINE	4'Ø x 12' T-T	
11	P-1103	H.O. CIRC PUMP, Dean Bros, R434	3"x4"x8 1/4", 350 gpm, 140 ft, hd.	
12	P-1103-EM	H.O. CIRC PUMP MOTOR	25 hp, 3530 rpm	
13	S-1100	CIRC H.O. FILTER, Cartridge Type		
14				
15				
16				
17				
18				
19				
20		<u>Equipment Within Process Area Utilized by "A", "C", &amp; "D" Lines</u>		
21				
22	D-1103	HOT OIL MAKE-UP & OVER-FILL TANK w/Heat Coils	6'Ø x 7' T-T	
23	P-1108+EM	H.O. TRANSFER PUMP, Cent w/1/2 hp Motor	1 1/2"x1"	
24	D-1104	MAKE-UP OIL DRUM	30 gal	
25	P-1105+EM	H.O. TO D-1103, Viking Gear w/Motor	1/2 hp	
26	D-1602	REACTOR RUPTURE DISK BLOWDOWN TANK	6'Ø x 10'H	
27				
28				
29				
30				
31				
32				
33		<u>Styrene Receiving, Transfer and Storage Area:</u>		
34				
35	T-1308	STYRENE STORAGE TANK, 30,000 gal	15'Ø x 24'H	
36	A-1304+MS+EM	T-1308 MIXER, Lightning	7 1/2 hp, 280 rpm, 21.7" Prop	
37	P-1311+MS	STYRENE PUMP, Cent, 100gpm@200ft.hd	2"x1 1/2"x7 5/16"	
38	P-1311-EM	P-1311 ELECTRIC MOTOR	10 hp	
39	FE-1300	FLOW METER, XOTechnology, S/N201945	2", Model: RT100-1-1	01/91
40	T-1309	STYRENE STORAGE TANK, 50,000 gal	20'Ø x 21'H	
41	A-1309+MS+EM	T-1309 MIXER, Lightning	7 1/2 hp, 280 rpm, 21.7" Prop	
42	P-1312	STYRENE PUMP, Cent, 100gpm@200ft.hd	2"x1 1/2"x7 5/16"	
43	P-1312-EM	P-1311 ELECTRIC MOTOR	10 hp	
44	FE-1301	FLOW METER, XOTechnology, S/N201943	2", Model: RT100-1-1	01/91
45	S-1305	MAGNET FILTER (for Railroad Car Unloading)	10'Ø w/3" in/out	
46	S-1307	MAGNET FILTER (for Railroad Car Unloading)	10'Ø w/3" in/out	
47	S-1308	MAGNET FILTER (for Railroad Car Unloading)	10'Ø w/3" in/out	
48	T-1315	ZINC MIXING TANK, Cone Bottom	6'-6"Ø x 5'H	
49	A-1315+EM	MIXER, Vertical w/Shaft and 10" Prop	2 hp	
50	Leased	PROPANE SPHERE (Petrolane), 250 gal	4'Ø	
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72	T-1301	FEED PREP TANK,	10'Ø x 18'H	
73	A-1307+MS+EM	TANK MIXER, Lightning	15.1" Prop, 3 hp	N 12/90
74	T-1302	FEED PREP TANK,	10'Ø x 18'H	
75				

BPACC00107

## AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST

EQUIPMENT NO. SUF		DESCRIPTION OF EQUIPMENT	SIZE	DATE ACQD	A
	A-1306+MS+EM	TANK MIXER, Lightning	15.1"Prop, 7½ hp		2
3	T-1303	FEED PREP TANK,	10'0 x 18'H		2
4	A-1308+MS+EM	TANK MIXER, Lightning	15.1"Prop, 3 hp	N 12/90	2
5	T-1304	FEED PREP TANK,	10'0 x 18'H		2
6	A-1305+MS+EM	TANK MIXER, Lightning	15.1"Prop, 7½ hp		2
7	T-1305	MINERAL OIL TANK	10'0 x 18'H		2
8	P-1306	MINERAL OIL PUMP, Viking Gear	3" x 3", 5 hp	I 12/90	2
9	T-1306	FEED PREP TANK,	10'0 x 24'H		2
10	A-1302+MS+EM	TANK MIXER, Lightning	15.1"Prop, 3 hp	N 12/90	2
11	T-1307	FEED PREP TANK,	10'0 x 24'H		2
12	A-1303+MS+EM	TANK MIXER, Lightning	15.1"Prop, 3 hp	N 12/90	2
13	P-1304+MS	FEED TRANSFER PUMP Cent.			2
14	P-1304-EM	P-1311 ELECTRIC MOTOR	10 hp		2
15	FI-1304	FLOW METER, XOTechnology, S/N202477	2", Model:RT100-1-1	N 01/91	2
16	FI-1305	Remote Read Out at A & C Line		N 01/91	2
17	FI-1305	Remote Read Out at D Line		N 01/91	2
18	P-1308+MS B	FEED TRANSFER PUMP Cent.		B 12/90	2
19	P-1308-EM	P-1311 ELECTRIC MOTOR	7½ hp		2
20	T-1314	CONDENSATE STORAGE TANK	9'0"0 x 15'H		2
21	FE-1201	VAPORS TO CONDENSER: EG&G FlowTechnology, S/N3201855	Model:FT-32NENA-GEA-3	N 01/91	2
22	E-1305	CONDENSATE VAPOR CONDENSER, S&T, Holland			2
23	E-1203+EM	CHILLER, Schreiber, S/N 1242, 3hp Comp, 1hp Pump, ½hp Fan	3 TON, Model 300AC		2
24	E-1204+EM	CHILLER, Schreiber, S/N 933, 1hp Comp, 1hp Pump, .2hp Fan	1 TON, Model 100AC		2
25	FE-1200	CHILLER COOLANT FLOW, Signet Scientific	1-½"	N 01/91	2
26	D-1305	CONDENSATE RECEIVER	18"0 x 6'L T-T		2
27	P-1305+EM	CONDENSATE PUMP, Viking Gear	1/2" x 1/2"		2
28		<u>Product Handling Systems:</u>			
29	B-1402	HOLDING BIN # 1	50,000 #, 8'-6"00 x 24'+CONE	O 7/69	2
30	F-1401+EM	B-1402 ROTARY VALVE	Samco, OBRV-12, w/1 hp Motor	O 7/71	2
31	B-1403	HOLDING BIN # 2	50,000 #, 8'-6"00 x 24'+CONE	O 7/71	2
32	F-1402+EM	B-1403 ROTARY VALVE	Samco, OBRV-12, w/1 hp Motor	O 7/71	2
33	C-1401+EM	HOLDING BIN BLOWER	Schwitzer, 4½"x4", 15 hp	O 7/71	2
34	B-1404	BLENDING BIN	50,000 #, 8'-6"00 x 24'+CONE	O 7/71	2
35	F-1403+GR+EM	B-1404 ROTARY VALVE	Samco, OBRV-12w/GR-AJ4B, 1½hp	O 7/71	2
36	B-1405	BAGGING BIN	50,000 #, 8'-6"00 x 24'+CONE	O 7/71	2
37	M-1402+EM	BAGGER	MHE Air Packer W/ Blower	O 2/92	2
38	C-1402+EM	BAGGER/BLENDER BLOWER	Duraflow-4509V8, 30 hp	O 7/71	2
39	E-1404	AIR COOLER, X-Changer Inc, AL, 1/3 hp FAN		N 4/91	2

BPACC00108

**AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST**

<u>EQUIPMENT</u> <u>NO</u> <u>SUF</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACQD</u>
	T-1401	SILO NO. 1, 118,000 #	12'-4"OD x 24'+ CONE	0 5/69
3	F-1413+EM	SILO # 1 ROTARY VALVE, Shick, T42G-1 w/GR	3/4 hp Motor	0 5/69
4				
5	C-1403+EM	T-1401 BLOWER, Sutorbilt, 4"x4"-7HB (Below Silo # 1)	25 hp	0 8/71
6				
7	T-1402	SILO NO. 2, 300,000 #	15'00 x 53'-0"H +45" CONE	0 12/70
8				
9	F-1417+EM	T-1402 ROTARY VALVE, Model 685F	21 rpm, 3/4 hp	0 12/70
10				
11	T-1403	SILO NO. 3, 300,000 #	15'00 x 53'-0"H +45" CONE	0 12/70
12				
13	F-1418+EM	T-1403 ROTARY VALVE, Model 685F	21 rpm, 3/4 hp	0 12/70
14				
15	C-1418+EM	SILOS 2 & 3 BLOWER (Below #3), Sutorbilt, 6M-F	25 hp	0 12/70
16				
17	T-1404	SILO NO. 4, 300,000 #	15'00 x 53'-0"H +45" CONE	0 7/71
18				
19	F-1419+EM	T-1404 ROTARY VALVE, Model 685F	21 rpm, 3/4 hp	0 12/70
20				
21	T-1405	SILO NO. 5, 300,000 #	15'00 x 53'-0"H +45" CONE	0 7/71
22				
23	F-1420+EM	T-1405 ROTARY VALVE, Model 685F	21 rpm, 3/4 hp	0 12/70
24				
25	C-1419	SILOS 4 & 5 BLOWER (Below #4)	Sutorbilt, 6M-B	0 12/70
26				
27	C-1419-EM	C-1419 BLOWER MOTOR	25 hp	0 7/71
28				
29	T-1406	SILO NO. 6, 300,000 #	15'00 x 53'-0"H +45" CONE	0 5/78
30				
31	F-1421+EM	T-1406 ROTARY VALVE, Semco, 1 hp		
32				
33	T-1407	SILO NO. 7	12' 00 x 35'H + CONE	
34				
	F-1422	T-1407 ROTARY VALVE	3/4 HP	
	T-1408	SILO NO. 8	12' 00 x 35'H + CONE	
38				
39	F-1423	T-1408 ROTARY VALVE	3/4 HP	
40				
41	C-1412	BLOWER FOR SILOS 6,7 & 8 (Below Silo # 8)	40 hp	
42				
43	S-1401	DUST COLLECTOR, Semco, Pneumatic	3'00 x 4'H + CONE	0 11/72
44				
45				
46		<u>General Plant Utilities:</u>		
47				
48	C-1502+EM	AIR COMPRESSOR	25 HP	0 7/76
49				
50	C-1505+EM	AIR COMPRESSOR	25 HP	0 11/76
51				
52	D-1502	AIR DRYER	??? hp	0 8/79
53				
54	D-1410	VACUUM SYSTEM DUST DRUM		
55				
56	C-1503+EM	VACUUM SYSTEM	10 hp BLOWER	0 10/72
57				
58	D-1504	WATER SOFTENER		
59				
60	E-1501	R5070 WATER COOLING TOWER		
61				
62	E-1502	YORK EVAP COOLING TOWER W/7.7 HP MOTOR		
63				
64	E-1503	YORK CHILLER		
65				
66	E-1504	WATER HEATER FOR STRAND BATHS	STATE 120 GAL	7/92
67				
68	G-1501	EMERGENCY GENERATOR w/Diesel Engine ELECTRICAL TRANSFER SWITCH		0 3/74 0 3/74
	P-1501	YORK CHILLER CIRC PUMP		
72				
73	P-1502	PROCESS COOLING WATER PUMP		
74				
75	P-1503	CONSOLATED SUMP PUMP		

BPACC00109

# AMOCO CHEMICAL COMPANY - TORRANCE PLANT - EQUIPMENT LIST

<u>EQUIPMENT</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>SIZE</u>	<u>DATE</u> <u>ACCD</u>	<u>A-</u> <u>T</u>
<u>NO</u>	<u>SUF</u>				
	P-1505 8	COOLING WATER PUMP			
3	S-1502	SAND FILTER, 1 HP			
4					
5	P-1507	SUMP PUMP, SAND FILTER			
6					
7	S-1506	SAND FILTER, 3/4 HP			
8					
9	P-1508	SUMP PUMP, SAND FILTER			
10					
11					

BPACC00110





## AMOCO CHEMICAL COMPANY - TO NCE POLYSTYRENE BATCH PLANT

2

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
<u>GEAR UNITS</u>								
		FORWARDING PUMP VARI-DRIVE, w/7.5 hp MOTOR	X 7/69	197 9990	GEAR DRIVE		52355157	1,272.36
		FORWARDING PUMP VARI-DRIVE & GEARS, w/7.5 hp MOTOR	X 7/69	197 9990	FOR A OR D LINES		52355156	1,272.36
		FORWARDING PUMP VARI-DRIVE & GEARS, w/ 7.5 hp MOTOR		197 9990	FOR C LINE			
		HOLD TANK VARI-DRIVE & GEARS, w/ 7.5 hp MOTOR		197 9990	ALL HOLD TANKS			
		REACTOR FORWARDING DRIVE		197 9990	ALL REACTORS			
		DV VARIDRIVE & GEARS, w/ 7.5 hp MOTOR		197 9990	ALL DEVOLATILIZERS			
		FORWARDING PUMP GEAR BOX, w/GEARS						
		FORWARDING PUMP GEAR BOX, w/o GEARS OR END PLATE						
<u>ROTARY VALVES</u>								
F-1400-EM		ROTARY VALVE MOTOR	X 11/82	215 4180	ROTARY VALVE MOTOR		53086879	123.20
F-1417-EM		F-1417 ROTARY VALVE MOTOR	X 11/82	215 4180	ROTARY VALVE MOTOR, F-1417		53086878	123.20
F-1416B		ROTARY VALVE	X 4/83	410 6050	ROTARY VALVE		53141959	1,686.27
F-1416C		ROTARY VALVE	X 7/84	410 6050	ROTARY VALVE		53241671	1,836.80
		GEAR SPEED REDUCERS (3)			WINSMITH			
<u>SCREENS</u>								
		VIBRATOR FINES SCREEN, THREE (3)	X					
<u>PUMP, VACUUM</u>								
		Leybold	N 10/90	189 5550	VACUUM PUMP, Leybold(J901102012)		55879134	5,256.50
<u>MOTORS</u>								
		50 hp, H.O. PUMP MOTOR	X 7/69	w/P-432	P-432 H.O. PUMP MOTOR			
		50 hp, H.O. PUMP MOTOR			BR 3 H.O. PUMP MOTOR			
		3/4 hp, C-LINE VIBRATING SCREEN MOTOR	X 10/77	w/S-305	SCREEN VIBRATOR w/MOTOR			
		10 hp, A-LINE WATER BATH BLOWER						
		10 hp, A or C-LINE TRANSFER BLOWER (2)			ALLIS-CHALMERS			

BPACC00112

AMOCO CHEMICAL COMPANY - TO VINCE POLYSTYRENE BATCH PLANT

3

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DA ACQ.	ASSET LEDGER INFORMATION		
NO.	SUF			P C D	SPECIFICATIONS	DWG ASSET NO COST
		5 hp, FIN FAN MOTOR FOR A,C LINES (2) 5 hp, FIN FAN MOTOR FOR D LINE  7.5 hp, STYRENE PUMP MOTOR  3 hp, SPARE  1/3 hp, RECLAIM TANK  5 hp, C-LINE HOLD TANK  1/4 hp, SPARE  1/2 hp, ACE MOTOR (2)  1/2 hp, SPARE  3/4 hp, MOTOR w/ GOULDS PUMP			ALLIS-CHALMERS LEESON  ALL STYRENE PUMPS      HOT OIL PUMP MOTOR   1 WIRH PUMP  LEESON	
		<u>VALVES</u>  FOXBORO HOT OIL CONTROL VALVES, 1" (6) FISHER HOT OIL CONTROL VALVE, 1" (1) FOXBORO COLD OIL CONTOL VALVE, 3" FISHER COLD OIL CONTROL VALVE, 3"  2" PLUG VALVES (2)  3" GATE VALVES, 150#			HOLDING TANK, REACTORS HOLDING TANK, REACTORS REACTORS REACTORS  REACTOR OVERFLOW LINE  OIL SERVICE	
		<u>MISC</u>  RELIEF VALVES, set 150#, FOR HEATERS (TWO) PRESSURE REGULATOR, 5 PSI SET PRESSURE (2)  A-LINE SHAKER			NITROGEN SERVICE	

BPACC00113

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## AMOCO CHEMICAL COMPANY - TO INCE POLYSTYRENE BATCH PLANT

3

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DAI ACCD	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
<u>INSTRUMENTS</u>		TEMPERATURE RECORDERS (5)	X 12/91	400 0320	FOXBORO, STRIP CHART, #124-RE	-	-	-
		TEMPERATURE RECORDER (1)	X 12/91	400 0320	FOXBORO, STRIP CHART, #124-FE	-	-	-
		E/P TRANSDUCER (3)	X 12/91	400 0320	TRANSMATION, #412T-J	-	-	-
		E/P TRANSDUCER (4)	X 12/91	400 0320	TRANSMATION, #610T-31	-	-	-
		E/P TRANSDUCER (1)	X 12/91	400 0320	TRANSMATION, #712T	-	-	-
		INSTRUMENT SHELF (1)	X 12/91	400 0320	FOXBORO, #102-4W	-	-	-
		GRID CHASSIS BOARD CARD	X 12/91	400 0320	METRASCOPE, #70224-126	-	-	690.00
		MAGNETIC TUNER CARD SET	X 12/91	400 0320	FISHER TYPE CS7001	-	-	60.00
		POWER SUPPLY	X 12/91	400 0320	METRASCOPE # 735-100-502A	-	-	570.00
		MULTIPLEXER SCANNER CARD	X 12/91	400 0320	METRASCOPE # 70305-03-C	-	-	740.00
		MOTHERBOARD DISPLAY ASSEMBLY	X 12/91	400 0320	METRASCOPE # M/S 200	-	-	960.00
		PROVOX POWER BOARD	X 12/91	400 0320	FISHER #CP-7202	-	-	350.00
		PROVOX COMPUTING CONTROLLER ASSEMBLY (3)	X 12/91	400 0320	FISHER #CL 7011X1-A2	-	-	510.00
		ALARM CARD	X 12/91	400 0320	METRASCOPE #70333-04C	-	-	690.00
		CLOCK AMPLIFIER BOARD (2)	X 12/91	400 0320	METRASCOPE #70229-86	-	-	725.00
		DIGITAL DISPLAY CARD	X 12/91	400 0320	METRASCOPE #70529	-	-	685.00
		PROVOX OPERATOR STATION (9)	X 12/91	400 0320	FISHER # CD 6201X1-A2-B19-C1-D1	-	-	485.00
		ASSEMBLY UNIT	X 12/91	400 0320	METRASCOPE MS-200	-	-	2,464.00
		PROVOX BASE TUNER (2)	X 12/91	400 0320	FISHER # CS 6002	-	-	-
		TUNER POWER SUPPLY (2)	X 12/91	400 0320	FISHER # CS 6002	-	-	-
		PROVOX OPERATING STATION CABLE (100')	X 12/91	400 0320	FISHER # LC 27267	-	-	-
		PROVOX OPERATING STATION BOX (4)	X 12/91	400 0320	FISHER # CL 5201	-	-	-
		PROVOX CONFIGURING CONTROLLER MODULE	X 12/91	400 0320	FISHER # CL 7001X1-A5	-	-	-
		PROVOX COMPUTING CONTROLLER MEMORY BOARD	X 12/91	400 0320	FISHER # CL 7002X1-A1	-	-	-
		PROVOX COMPUTING CONTROLLER MEMORY BOARD	X 12/91	400 0320	FISHER # CL 7002X012-A2	-	-	-
		SERVICE TRANSFER UNIT CARD	X 12/91	400 0320	FISHER # CS 6201X1-A1	-	-	-

BPACC00114

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AMOCO CHEMICAL COMPANY - TOI NCE POLYSTYRENE BATCH PLANT

4

<u>EQUIPMENT</u>		<u>DESCRIPTION OF EQUIPMENT</u>	<u>DAT.</u> <u>ACQD</u>	<u>ASSET LEDGER INFORMATION</u>		
<u>NO.</u>	<u>SUF</u>			<u>P C D</u>	<u>SPECIFICATIONS</u>	<u>DWG</u> <u>ASSET NO</u> <u>COST</u>
		LOOP POWERED ISOLATOR	X 12/91	400 0320	ANALOG DEVICES #2824B	- -
		DIGITAL DISPLAY CABINET (3)	X 12/91	400 0320	METRASCOPE MS-200	- -
		THERMOCOUPLE JUNCTION BOX (3)	X 12/91	400 0320	METRASCOPE #70337F	- -

BPACC00115

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**AMOCO CHEMICAL COMPANY - TOLUENE POLYSTYRENE BATCH PLANT**

4

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DAI. ACQD	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
EQUIPMENT OUT OF SERVICE AND CONSIDERED SURPLUS								
surp E-1501		COOLING TOWER, 5RD70, RSD	O 5/69	410 3110	5RD70 COOLING TOWER		52116113	2,153.92
surp E-1501-EM		5R700 TOWER FAN MOTOR, 1-1/2 hp	O	W/E-1501	E-1501 FAN MOTOR		W/E-1501	
surp E-1501		R5D70 COOLING TOWER	O 6/88	410 9660	E-1510, R5D70 COOLING TOWER		55534022	3,417.88
surp F-1301		STYRENE METER	O 11/74	400 0320	F-1301 OLD		51990192	839.19
surp F-1302		STYRENE METER	O 11/74	400 0320	F-1302 OLD		51990193	587.26
surp F-1303		STYRENE METER	O 11/74	400 0320	F-1303 OLD		51990194	587.26
surp F-1304		STYRENE METER	O 11/74	400 0320	F-1304 OLD		52715082	1,147.50
surp M-992		MELT FLOW TESTER (OLD) ???	X 5/69	162 6190	FLOW MELT TESTER		52116090	1,102.77
surp M-993		MELT FLOW TESTER	O 9/85	162 6190	FLOW MELT TESTER		53380454	1,500.00
surp		MELT FLOW METER, Flowrator	O 9/87	162 2200	MELT FLOW METER		55383257	4,841.62
EQUIPMENT SOLD								
sold C-1603		REGRIND BLOWER	X 7/63	188 1000	REGRIND BLOWER		51921183	386.40
sold F-1601		REGRIND ROTARY VALVE	X 7/71	215 4180	REGRIND ROTARY VALVE		52116112	1,213.67
sold G-1601		REGRINDER W/100 HP MOTOR	X 7/71	268 5010	REGRINDER W/MOTOR		52116119	15,094.56
sold S-1601		REGRIND HOPPER MAGNET GRATE	X 7/71	630 5030	REGRIND HOPPER MAGNETS		52116120	359.43
sold G-1601		REGRIND ELECT	X 7/71	176 9410	REGRIND ELECT		51921160	1,427.29
sold C-1508		SMOG HOG	O 3/82	261 4030	SMOG HOG		53023008	9,688.98
sold		PICKUP TRUCK, 1981 CHEV, #1GCCW80A782412711	X	906 4200	PICKUP TRUCK, 1981 CHEV		52964836	7,933.00
EQUIPMENT SENT TO SOUTH CAROLINA								
		EMERGENCY AIR, Survivair	O 12/79	234 7300	EMERGENCY AIR PACK		52715081	1,327.00
		EMERGENCY AIR, Survivair	O 12/79	234 7300	EMERGENCY AIR PACK		W/ABOVE	
EQUIPMENT SENT TO WILLOW								
VAC PUMP		VACUUM PUMP, Kinney	N 10/90	189 5550	VAC PUMP, Kinney (M63411/C60)		55879133	8,628.38

BPACC00116

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**AMOCO CHEMICAL COMPANY - TOLUENE POLYSTYRENE BATCH PLANT**

5

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DATE ACQD	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
ASSETS DELETED DUE TO SEPT. 1990 FIRE								
f T-1302		T-1302 PIPING	O 1/72	400 0340	T-1302 PIPING		51921340	1,450.00
f T-1304		T-1304 PIPING	O 1/72	400 0340	T-1304 PIPING		51921339	1,450.00
f T-1308		T-1308 PIPING	X 2/91	400 0340	PIPING FOR T-1308		51921329	812.79
f --1300		COATING	O 8/82	400 0569	COATING		53056569	1,029.62
f T-1402		ELECT	O 12/70	176 9410	T-1402 ELECT		51921152	3,560.29
f T-1403		ELECT	O 12/70	176 9410	T-1403 ELECT		51921153	3,560.29
f T-1404		ELECT	O 12/70	176 9410	T-1404 ELECT		51921161	4,227.00
f T-1405		ELECT	O 12/70	176 9410	T-1405 ELECT		51921162	4,227.00
f T-1406		ELECT	O 5/78	176 9410	T-1406 ELECT		52556327	1,454.13
f 1400		ELECT	X 7/71	176 9410	1400 ELECT		51921154	578.76
f 1400		ELECT	X 7/71	176 9410	1400 ELECT		51921165	693.45
f 1400		ELECT	X 12/82	176 9410	1400 ELECT		53111589	427.37
f 1400		ELECT	X 8/71	176 9410	1400 ELECT		51921155	332.48
f 1400		INSTALL TUBING	O 8/71	215 4191	1400 INSTALL TUBING		51921264	2,438.00
f 1400		TUBING TO SILOS	O 7/71	400 0390	1400 TUBING TO SILOS		52265582	900.00
f 1400		MODIFY TO TUBING	X 7/80	400 0390	1400 TUBE MODIFY			968.00
f 1400		#3MODIFY	O 10/81	400 0349	#3 MODIFY		52975380	968.00
f 1400		TRUCK RACK TUBING	X 10/72	266 2550	1400 TT RACK TUBE		51921293	907.62
f 1400		TT RACK MODIFY	X 9/81	266 2550	1400 TT RACK MODIFY		52964839	1,300.00
f 1400		TUBING	X 5/73	400 0349	1400 TUBING		51921341	5,483.16
f 1400		SILO INSTRUMENTS	O 2/77	400 0320	1400 INSTRUMENTS		52419271	3,604.20
f 1400		TUBING #7	O 10/82	400 0349	#7 TUBE		53076803	537.50
f 1400		TUBING #8	O 10/82	400 0349	#8 TUBE		53076804	537.50
f 1400		TUBING	O 10/79	400 0349	1400 TUBE		52682044	3,829.21
f D-1601		A & B BLOWDOWN	O 12/77	410 5500	A & B BLOWDOWN		52518191	4,050.57
f D-1602		D BLOWDOWN	O 12/77	410 5500	D BLOWDOWN			

BPACC00117

AMOCO CHEMICAL COMPANY - TOI NCE POLYSTYRENE BATCH PLANT

6

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DAL ACCD	ASSET LEDGER INFORMATION			
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO
ASSETS JUNKED SINCE LAST PROPERTY REPORT							
J C-1507		INSTALL & ELECT	X 12/74	261 3061	DEMIST INSTALL & ELECT	51946984	6,821.29
J 1400		1315 STEPS	O 12/74	410 6070	1315 STEPS	55199552	564.69
J 1400		TANK FARM STEPS	O 7/75	410 6500	TANK FARM STEPS	52436915	585.85
J 77		LAB FUME HOOD	X				
J T-1402		SILLO # 2 MAT'L	X 12/70	176 9410	SILLO 2 MATL	51921152	3,560.29
J T-1403		SILLO # 3 MAT'L	X 12/70	176 9410	SILLO 3 MATL	51921153	3,560.29
J T-1404		SILLO # 4 MAT'L	X 7/71	176 9410	SILLO 4 MATL	51921161	4,227.00
J T-1405		SILLO # 5 MAT'L	X 7/71	176 9410	SILLO 5 MATL	51921162	4,227.00
J P-124		P-124 VACUUM PUMP	O 8/80	189 9000	P-124 VAC PUMP	52824193	6,100.12
J P-123		VACUUM PUMP, P-123	O 7/71	189 9000	P-123 VAC PUMP	52265575	2,530.00
J P-324		VACUUM PUMP, P-324	O 1/80	189 9001	P-324 VAC PUMP	52715080	3,018.46
J EM-324		VAC PUMP MOTOR	O 1/72	189 9559	P-324 MOTOR	51921244	168.00
J P-323		P-323 VACUUM PUMP	O 12/70	189 9000	P-323 VAC PUMP	52715079	2,217.70
J P-423		P-423 VACUUM PUMP	O 7/69	189 9000	P-423 VAC PUMP	52355151	2,182.95
J P-424		P-424 VACUUM PUMP	O 7/69	189 9000	P-424 VAC PUMP	52355152	2,182.95
J P-231		P-231? PUMP	X 7/63	189 9000	P-231?	51921210	3,000.00
J P-131		P-131 PUMP	X 7/63	189 9000	P-131	51921205	3,506.41
J P-1503		SUMP, CONSOLIDATED, 7.5	X 12/74	189 9000	SUMP PUMP, CONSOLIDATED	52116150	476.20
J G-1601		REGRIND INSTALL	X 7/71	410 4481	REGRIND INSTALL	51921402	7,054.70
J 5800		MOTOR CONTROL PANEL (PLANT)	X 7/71	400 0320	MCC (PLANT)	51921312	2,365.10
J 5800		MOTOR CONTROL PANEL, ELECTRICAL	X 7/71	176 9410	MCC ELECTRIC	51921156	3,725.05
J 5800		MOTOR CONTROL PANEL, ENCLOSURE	X 8/71	798 2025	MCC ENCLOSURE	51921475	846.27
J 5800		MOTOR CONTROL PANEL, MODIFY	X 9/71	400 0320	MCC MODIFY	52964840	2,002.76
J -1300		PIPING FOR 1300 SECTION	X 11/74	400 0340	PIPING	51990197	2,002.70
J		E-1501 ADD	O 9/88	410 9660	E-1501 ADD	55581507	654.28
J M-219S		B-LINE BAGGER w/MOTOR	O 7/63	700 0630	M-219	52265588	2,057.07

BPACC00118



## AMOCO CHEMICAL COMPANY - TO: NCE POLYSTYRENE BATCH PLANT

7

EQUIPMENT		DESCRIPTION OF EQUIPMENT	DA ACQD	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
j D-1503		DEMIST DRUM	X 4/82	261 4030	DEMIST DRUM		53029670	
j D-1503		SMOG FILTER WASH TANK	X 2/82				53029670	350.00
j C-1504B		BUFFALO EXHAUSTER W/MOTOR	O 12/74	188 1110	BUFFALO UNIT		52116151	1,049.00
j S-1504		PRE-FILTER	O 7/71	410 4110	S-1504 PRE-FILTER		51921384	230.14
j S-1505		AFTER-FILTER	O 7/71	410 4140	S-1505 AFTER-FILTER		51921385	151.74
j C-1507		BRINKS DEMISTER(SPARE)	O 12/74	261 3060	BRINKS DEMIST(SPARE)		51946983	8,827.33
j C-1507		BRINKS DEMISTER(SPARE)	O 10/78	261 3069	BRINKS DEMIST(SPARE)		52592396	7,133.40
j		G-410 SOUNDPROOFING	O 12/75	410 4469	PELLETIZED SOUND BUF		52436916	7,678.78
j --5200		SOUNDPROOFING WATER STRIPPERS (3)	O 5/73	410 4190	WATER STRIPPER SOUNDPROOFING		51921386	966.67
j-1400		TRUCK RACKOO	O 11/74	266 2550	T-4 TRUCK RACK		52265591	2,429.25
j-1400		AIR ELIMINATORS	O 7/75	400 0329	TANK AIR ELIMINATORS		52436930	1,070.25
j P-1507		LITTLE GIANT SUMP PUMP, 1/3 HP	X 10/85					188.55
j C-1315		CONVEYOR ??? PART OF ZINC SYS	X					
j E-1201 -C		CHILLER,Schreiber, 10 TON	X 7/69	410 4200	A & C LINE CHILLER w/MOTORS		52355174	2,412.XX
j		TELEPHONE, Comdial	O 9/88	266 8900	TELEPHONE, Comdial		55581511	4,007.18
j -1100		COOLING WATER LINES TO PUMPS	O 11/74	408 0900	COOLING WATER TO PUMPS 51990198		52622643	975.10
j		WATER STRIPPER W/MOTOR						
jTO-181		AIR CONDITIONER, YORK, WALL UNIT, #LEH 100 6 B	X 7/68	864 4926	PLANT # LEH 100 6 B		51921094	159.97
jTO-180		AIR CONDITIONER & HEATER COMBINATION	X 6/70	864 4997	PLANT A/C UNIT		51921096	800.00
jTO-215		AIR CONDITIONER, KENMORE	O	864 ??	A/C UNIT, KENMORE			
jTO-216		AIR CONDITIONER, KENMORE	O	864 ??	A/C UNIT, KENMORE			
jTO-107		CHAIR, STEEL CASE SWIVEL # 5501	X 5/72	851 1300	OFFICE CHAIR		51921064	334.00
jTO-113		CHAIR, STRAIGHT BACK ARMLESS TAN	X 7/63	851 1300	OFFICE CHAIR		51921052	29.06
jTO-114		CHAIR, STONE TAN	X 7/63	851 1300	OFFICE CHAIR		51921053	42.75
jTO-152		CHAIR, SWIVEL ARM BLACK	X 5/69	851 1300	OFFICE CHAIR		51921061	58.50
jTO-153		CHAIR, SWIVEL ARM BLACK	X 5/69	851 1300	OFFICE CHAIR		51921062	58.50
jTO-167		CHAIR, HI-BACK SWIVEL ROCKER BLACK	X 5/69	851 1300	PLANT CHAIR		52061554	105.00

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**AMOCO CHEMICAL COMPANY - TO VINCE POLYSTYRENE BATCH PLANT**

8

EQUIPMENT		DESCRIPTION OF EQUIPMENT	D ACQ	ASSET LEDGER INFORMATION				
NO.	SUF			P C D	SPECIFICATIONS	DWG	ASSET NO	COST
JTO-221		CHAIR, SWIVEL ARM BLUE	X 5/64	851 1300	PLANT OFFICE CHAIR		51921058	39.95
JTO-204		CHAIR, STRAIGHT BACK ARMLESS TAN	X 7/63	851 1300	MAINT OFFICE CHAIR		51921056	29.06
JTO-100		DESK, REGULAR STEEL TAN	X 7/63	851 1800	OFFICE DESK		51921069	151.00
JTO-101		DESK, REGULAR STEEL TAN	X 7/63	851 1800	OFFICE DESK		51921070	151.00
JTO-102		DESK, SECTERTIAL W/RETURN	X 5/72	851 1800	OFFICE DESK		51921078	307.90
JTO-165		DESK, REGULAR STEEL	X 5/63	851 1800	LAB DESK		51921073	84.70
JTO-146		HOLDER, DESK TOP BOOK, TAN	O	851 7777				
JTO-186		TABLE & 4 FOLDING METAL CHAIRS	X 4/72	851 3500	PLANT		51921092	57.75
JTO-160		CLOCK, WALL	X 11/69	851 3100	OFFICE		51921106	19.98
JTO-217		CLOCK, WALL, G.E. 6"	X 12/67	851 3100	PLANT, 6" G.E.		51921105	19.95
JTO-543		CLOCK, WALL, SUNBEAM, 8"	X	851 ??	CLOCK, 8" SUNBEAM			
JTO-544		CLOCK, WALL, G.E. 8"	X	851 ??	CLOCK, 8" G.E.			
JTO-545		CLOCK, WALL, G.E. 12"	X	851 ??	CLOCK, 12" G.E.			
JTO-131		CALCULATOR, HERMES, SN # D109791	X 5/72	881 2048	CALCULATOR, HERMES, #D109791		51921101	517.50
JTO-132		CALCULATOR, HERMES, SN # C990707	X 8/80	881 2048	CALCULATOR, HERMES, #C990707		51921100	577.75
JTO-175		CALCULATOR, HERMES, SN # 8874398	X 5/69	881 2048	CALCULATOR, HERMES, #8874398		51921099	581.00
JTO-223		MULTIPLIER, VICTOR, MODEL 72-85-54, SN # 4656588	X 12/74	881 2140	VICTOR MULTIPLIER, SN # 4656588		51946975	185.00
JTO-225		CALCULATOR, MONROE, MODEL 1430, SN # E249311	X 12/76	881 2075	CALCULATOR, MONROE, SN # E249311		52395883	362.00
JTO-224		CALCULATOR, MONROE, MODEL 1430, SN # E2558081	X 11/80	881 2048	CALCULATOR, MONROE, SN # E2558081		52865690	148.00
J		CALCULATOR, SHARP	X 1/87	881 2117	CALCULATOR, SHARP, S/N 53151171		55255156	100.01
J		OFFICE, PORTABLE, 8' x 30'	O 11/70	060 6249	PORTABLE OFFICE, 8' x 30'		51921027	1,505.00
7TO-127		TYPEWRITER, IBM SELECTRIC, SN # 5463722	X 5/69	871 8082	IBM TYPEWRITER, #5463722		51921111	510.00
7TO-129		TYPEWRITER, IBM SELECTRIC, SN # 4825875	X 5/66	871 8082	IBM TYPEWRITER, #4825875		51921110	505.00
7WS-258		TYPEWRITER, IBM EXECUTIVE, SN # 1316537	X 9/67	871 8082	IBM TYPEWRITER, #1316537		51946977	185.95

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**SCHEDULE 3: LIST OF EXCLUDED CONTRACTS**

None.

**SCHEDULE 4: LIST OF EXCLUDED PERMITS**

None.

## SCHEDULE 5

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in the policy form designated on the face page of this report would be as follows:

- A 1. PROPERTY TAXES, INCLUDING ANY ASSESSMENTS COLLECTED WITH TAXES, TO BE LEVIED FOR THE FISCAL YEAR 1992-93 WHICH ARE A LIEN NOT YET PAYABLE.
- B 2. PROPERTY TAXES FOR THE FISCAL YEAR SHOWN BELOW ARE PAID. FOR PRORATION PURPOSES THE AMOUNTS ARE:
- |                  |              |
|------------------|--------------|
| FISCAL YEAR:     | 1991-1992    |
| 1ST INSTALLMENT: | \$11,065.67  |
| 2ND INSTALLMENT: | \$8,176.09   |
| EXEMPTION:       | \$NONE       |
| CODE AREA:       | 1519         |
| ASSESSMENT NO:   | 7351-035-003 |
- C 3. SUPPLEMENTAL TAXES FOR THE FISCAL YEAR 1990-1991, ASSESSED PURSUANT TO THE PROVISIONS OF CHAPTER 3.5 (COMMENCING WITH SECTION 75) OF THE REVENUE AND TAXATION CODE OF THE STATE OF CALIFORNIA.
- |                  |                |
|------------------|----------------|
| 1ST INSTALLMENT: | \$21.03 (PAID) |
| 2ND INSTALLMENT: | \$21.03 (PAID) |
| CODE AREA:       | 1519           |
| ASSESSMENT NO.:  | 7351-035-003   |
- D 4. THE LIEN OF SUPPLEMENTAL TAXES, IF ANY, ASSESSED PURSUANT TO THE PROVISIONS OF CHAPTER 3.5 (COMMENCING WITH SECTION 75) OF THE REVENUE AND TAXATION CODE OF THE STATE OF CALIFORNIA.
- E 5. IF REAL PROPERTY TAXES ARE TO BE ADVANCED THROUGH THIS ORDER IN A TIMELY AND EFFICIENT MANNER, THIS OFFICE SHOULD BE SENT THE ORIGINAL TAX BILLS WHICH ARE IN THE POSSESSION OF THE OWNER(S) PRIOR TO THE CLOSE OF THIS TRANSACTION AND/OR FIVE DAYS PRIOR TO THE DUE DATE. THIS GREATLY MINIMIZES MISPOSTINGS AND REDUCES FUTURE COMPLAINTS TO THE ESCROW AND TITLE COMPANY.
- SUBESCROW FUNDS WILL BE USED TO PAY ANY TAXES THAT WILL BE ADVANCED THROUGH THIS TRANSACTION. IF NO SUBESCROW IS CONTEMPLATED, THEN PRIOR TO CLOSING, CHICAGO TITLE MUST BE PROVIDED WITH A CHECK FROM THE ESCROW TO PAY THE TAXES. THE CHECK MUST BE MADE PAYABLE TO "LOS ANGELES COUNTY TAX COLLECTOR". ONLY ESCROW CHECKS OR CERTIFIED FUNDS WILL BE ACCEPTED.
- F 6. AN EASEMENT OVER PARCELS 1 AND 4 FOR PIPE LINES AND INCIDENTAL PURPOSES AS GRANTED TO DOMINGUEZ WATER CORPORATION, BY DEED RECORDED IN BOOK 151 PAGE 265, OFFICIAL RECORDS, AND AS RESERVED BY DEEDS FROM DOMINGUEZ ESTATE COMPANY, RECORDED IN BOOK 781 PAGE 349, OFFICIAL RECORDS, AND FROM MARIA DE LOS REYES DE FRANCES, RECORDED IN BOOK 936 PAGE 287, OFFICIAL

SCHEDULE 5  
(continued)

RECORDS.

BY DEED FROM DOMINGUEZ WATER CORPORATION, RECORDED SEPTEMBER 14, 1956, IN BOOK 52304 PAGE 49, OFFICIAL RECORDS, THE ABOVE EASEMENT WAS CONFINED TO THE EASTERLY 15 FEET AND THE SOUTHERLY 10 FEET OF SAID LAND.

- G 7. COVENANTS, CONDITIONS AND RESTRICTIONS (DELETING THEREFROM ANY RESTRICTIONS BASED ON RACE, COLOR OR CREED) AS SET FORTH IN THE DOCUMENT

RECORDED: IN BOOK 3128 PAGE 351, OFFICIAL RECORDS

- H 8. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: DOMINGUEZ WATER CORPORATION  
PURPOSE: WATER PIPES  
RECORDED: FEBRUARY 28, 1952 IN BOOK 38362 PAGE 377, OFFICIAL RECORDS  
AFFECTS: THE EAST 10 FEET AND OVER THE SOUTH 10 FEET OF PARCELS 1 AND 4.

- I 9. AN EASEMENT OVER PARCELS 2 AND 3 FOR ZANJAS, DITCHES, FLUMES AND CONDUITS, AS PROVIDED FOR IN THE FINAL DECREE OF PARTITION ENTERED IN CASE NO. 3284, OR THE SUPERIOR COURT, IN AND FOR THE COUNTY OF LOS ANGELES.

- J 10. THE RIGHT TO DEVELOP AND REMOVE WATER AND CONSTRUCT PUMPING PLANTS; ALSO AN EASEMENT FOR CONDUITS, DITCHES, CANALS AND FOR OTHER INCIDENTAL PURPOSES, AND OTHER RIGHTS AND EASEMENTS, AS CONVEYED TO DOMINGUEZ WATER COMPANY, AS EXCEPTED IN THE DEED FROM DOMINGUEZ ESTATE COMPANY, RECORDED IN BOOK 871 PAGE 349, OFFICIAL RECORDS, AFFECTING PARCELS 2 AND 3.

- K 11. AN EASEMENT FOR RIGHT OF ENTRY IN AND TO PARCELS 2 AND 3 AND ANY AND ALL ROADS, STREETS, AVENUES AND ALLEYS BOUNDING ANY PORTION THEREOF FOR CONDUITS AND INCIDENTAL PURPOSES, AS RESERVED IN THE DEED FROM TITLE INSURANCE AND TRUST COMPANY, RECORDED IN BOOK 6697 PAGE 399, OFFICIAL RECORDS.

- L 12. COVENANTS, CONDITIONS AND RESTRICTIONS (DELETING THEREFROM ANY RESTRICTIONS BASED ON RACE, COLOR OR CREED) AS SET FORTH IN THE DOCUMENT REFERRED TO IN THE NUMBERED ITEM LAST ABOVE SHOWN.

- M SAID COVENANTS, CONDITIONS AND RESTRICTIONS PROVIDE THAT A VIOLATION THEREOF SHALL NOT DEFEAT THE LIEN OF ANY MORTGAGE OR DEED OF TRUST MADE IN GOOD FAITH AND FOR VALUE.

SCHEDULE 5  
(continued)

13. AN EASEMENT FOR STREET PURPOSES TO BE USED IN COMMON WITH OTHERS AFFECTING PARCELS 2 AND 3 AS RESERVED IN THE DEED FROM CHARLES YAKER RECORDED IN BOOK 6759 PAGE 162, OFFICIAL RECORDS, IN THE DEED FROM SAM ALBRUMS, RECORDED IN BOOK 9389 PAGE 84, OFFICIAL RECORDS, AND AS GRANTED TO THE OWNERS OF OTHER PORTIONS OF LOT 6 TRACT NO. 4671, BY VARIOUS DEEDS OF RECORD AND RESERVED BY SAM STARK AND ESTHER STARK, HUSBAND AND WIFE, IN DEEDS RECORDED DECEMBER 2, 1958 IN BOOK D-291 PAGE 840, AND IN BOOK D-291 PAGE 84, OFFICIAL RECORDS.

14. AN EASEMENT OVER PARCEL 3 FOR INGRESS AND EGRESS AS GRANTED TO THE ALHI CORPORATION, A CORPORATION, BY DEED RECORDED DECEMBER 27, 1960 IN BOOK D-1074 PAGE 137, OFFICIAL RECORDS.

15. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: AMERICAN CHEMSOLV  
PURPOSE: INGRESS AND EGRESS AND FOR LOCATION AND PLACEMENT  
OF UNDERGROUND UTILITIES AND/OR SEWER LINES  
RECORDED: MAY 4, 1962 AS INSTRUMENT NO. 2001  
AFFECTS: AS DESCRIBED THEREIN.

16. A DOCUMENT ENTITLED "CHATTEL MORTGAGE", EXECUTED BY BRAND PLASTICS CO., ALSO KNOWN AS BRAND PLASTICS COMPANY, A DELAWARE CORPORATION AND AMOCO CHEMICALS CORPORATION, A DELAWARE CORPORATION, SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED, RECORDED JULY 19, 1962 AS INSTRUMENT NO. 492.

17. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW, AND ANY OTHER OBLIGATIONS SECURED THEREBY

AMOUNT: \$225,000.00  
DATED: JUNE 26, 1962  
TRUSTOR: BRAND PLASTICS CO., ALSO KNOWN AS BRAND PLASTICS  
COMPANY, A DELAWARE CORPORATION  
TRUSTEE: TITLE INSURANCE AND TRUST COMPANY, A CALIFORNIA  
CORPORATION  
BENEFICIARY: AMOCO CHEMICALS CORPORATION, A DELAWARE CORPORATION  
RECORDED: JULY 19, 1962 AS INSTRUMENT NO. 493

AN AGREEMENT WHICH STATES THAT THIS INSTRUMENT WAS SUBORDINATED

TO: EASEMENT  
RECORDED: JULY 25, 1968 AS INSTRUMENT NO. 2376  
BY AGREEMENT

SCHEDULE 5  
(continued)

RECORDED: JULY 3, 1968 AS INSTRUMENT NO. 2038

- T 18. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: SOUTHERN CALIFORNIA GAS COMPANY, A CORPORATION  
PURPOSE: THE TRANSPORTATION OF GAS, WITH THE RIGHT OF  
INGRESS AND EGRESS  
RECORDED: SEPTEMBER 21, 1962 AS INSTRUMENT NO. 4395  
AFFECTS: THE NORTHERLY 12.5 FEET OF PARCEL 2.

- U 19. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: THE COUNTY OF LOS ANGELES  
PURPOSE: SANITARY SEWERS  
RECORDED: JULY 25, 1968 AS INSTRUMENT NO. 2376  
AFFECTS: THE NORTHERLY 12.5 FEET OF THE EASTERLY 258 FEET OF  
THE WESTERLY 467 FEET OF LOT 6.

- V 20. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION  
PURPOSE: DISTRIBUTING ELECTRICAL ENERGY  
RECORDED: SEPTEMBER 8, 1960 AS INSTRUMENT NO. 2889  
AFFECTS: AS DESCRIBED THEREIN.

- W 21. AN EASEMENT AFFECTING THE PORTION OF SAID LAND AND FOR THE PURPOSES STATED HEREIN, AND INCIDENTAL PURPOSES, CONDEMNED BY FINAL DECREE (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

PURPOSE: FEE  
CASE NO: C 160691  
RECORDED: SEPTEMBER 17, 1976 AS INSTRUMENT NO. 5721  
AFFECTS: THE WESTERLY 7 FEET OF PARCEL 3.

- X 22. A NOTICE OF VIOLATION

DATED: JUNE 24, 1992  
EXECUTED BY: DEPARTMENT OF REGIONAL PLANNING



SCHEDULE 5  
(continued)

RECORDED:

JUNE 24, 1992 AS INSTRUMENT NO. 92-1150421

- Y 23. ANY EASEMENTS NOT DISCLOSED BY THOSE PUBLIC RECORDS WHICH IMPART CONSTRUCTIVE NOTICE AND WHICH ARE NOT VISIBLE AND APPARENT FROM AN INSPECTION OF THE SURFACE OF SAID LAND.
- Z 24. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS.
- AA 25. ANY CLAIM, WHICH ARISES OUT OF THE TRANSACTION VESTING IN THE INSURED THE ESTATE OR INTEREST INSURED BY THIS POLICY, BY REASON OF THE OPERATION OF FEDERAL BANKRUPTCY, STATE INSOLVENCY, OR SIMILAR CREDITORS, RIGHTS LAWS.

## SCHEDULE 5

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in the policy form designated on the face page of this report would be as follows:

- A 1. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, FOR THE FISCAL YEAR 1992-1993.

1ST INSTALLMENT: \$544.27  
PENALTY: \$54.42 (DUE AFTER DECEMBER 10)  
2ND INSTALLMENT: \$544.26  
PENALTY AND COST: \$64.42 (DUE AFTER APRIL 10)  
HOMEOWNERS  
EXEMPTION: \$NONE  
CODE AREA: 1519  
ASSESSMENT NO: 7351-035-002

- B 2. SAID PROPERTY HAS BEEN DECLARED TAX-DEFAULTED FOR NON-PAYMENT OF DELINQUENT TAXES FOR FISCAL YEAR 1988-1989 (AND SUBSEQUENT YEARS, IF ANY)

AMOUNT TO REDEEM: \$5,404.23  
IF PAID BY: NOVEMBER 30, 1992

IF PAYMENT IS TO BE MADE THROUGH THIS TITLE ORDER, IN ORDER TO INSURE THAT PAYMENT IS RECEIVED BY THE TAX COLLECTOR IN A TIMELY MANNER, GOOD FUNDS MUST BE IN POSSESSION OF THIS COMPANY AT LEAST 3 BUSINESS DAYS PRIOR TO THE ABOVE DATE.

- C 3. THE LIEN OF SUPPLEMENTAL TAXES, IF ANY, ASSESSED PURSUANT TO THE PROVISIONS OF CHAPTER 3.5 (COMMENCING WITH SECTION 75) OF THE REVENUE AND TAXATION CODE OF THE STATE OF CALIFORNIA.

- D 4. IF REAL PROPERTY TAXES ARE TO BE ADVANCED THROUGH THIS ORDER IN A TIMELY AND EFFICIENT MANNER, THIS OFFICE SHOULD BE SENT THE ORIGINAL TAX BILLS WHICH ARE IN THE POSSESSION OF THE OWNER(S) PRIOR TO THE CLOSE OF THIS TRANSACTION AND/OR FIVE DAYS PRIOR TO THE DUE DATE. THIS GREATLY MINIMIZES MISPOSTINGS AND REDUCES FUTURE COMPLAINTS TO THE ESCROW AND TITLE COMPANY.

SUBESCROW FUNDS WILL BE USED TO PAY ANY TAXES THAT WILL BE ADVANCED THROUGH THIS TRANSACTION. IF NO SUBESCROW IS CONTEMPLATED, THEN PRIOR TO CLOSING, CHICAGO TITLE MUST BE PROVIDED WITH A CHECK FROM THE ESCROW TO PAY THE TAXES. THE CHECK MUST BE MADE PAYABLE TO "LOS ANGELES COUNTY TAX COLLECTOR". ONLY ESCROW CHECKS OR CERTIFIED FUNDS WILL BE ACCEPTED.

- E 5. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

# SCHEDULE 5 (continued)

GRANTED TO: DOMINGUEZ WATER CORPORATION  
 PURPOSE: PIPE LINES  
 RECORDED: IN BOOK 1515 PAGE 265, OFFICIAL RECORDS

F AND RESERVED IN THE DEED

EXECUTED BY: DOMINGUEZ ESTATE COMPANY  
 RECORDED: IN BOOK 871 PAGE 349, OFFICIAL RECORDS

AND RESERVED IN THE DEED

EXECUTED BY: MARIA DE LOS REYES DE FRANCES  
 RECORDED: IN BOOK 936 PAGE 287, OFFICIAL RECORDS

BY DEED FROM DOMINGUEZ WATER CORPORATION, RECORDED SEPTEMBER 14, 1956 IN BOOK 52304 PAGE 49, OFFICIAL RECORDS, THE ABOVE EASEMENT WAS CONFINED TO THE EASTERLY 15 FEET AND THE SOUTHERLY 10 FEET OF SAID LAND.

- G 6. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: DOMINGUEZ WATER CORPORATION  
 PURPOSE: WATER PIPES  
 RECORDED: FEBRUARY 28, 1952 IN BOOK 38362 PAGE 377, OFFICIAL RECORDS  
 AFFECTS: THE EAST 10 FEET AND OVER THE SOUTH 10 FEET.

- H 7. AN EASEMENT FOR LOCATION AND PLACEMENT OF UNDERGROUND UTILITIES AND/OR SEWER LINES AND FOR THE PURPOSES OF LAYING, MAINTAINING, OPERATING AND REMOVING AT ANY TIME A LINE OF PIPE TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS TO EXCAVATE LAND FOR, CONSTRUCT, MAINTAIN, ATTEND AND/OR REMOVE SAID PIPE LINE OR LINES WITH RESPECT TO THE NORTHERLY 5 FEET OF THE SOUTH 3 ACRES OF LOT 5 OF TRACT NO. 4671.

- I 8. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO: TITLE INSURANCE AND TRUST COMPANY  
 PURPOSE: PIPES FOR CONDUCTING WATER FOR IRRIGATION  
 RECORDED: AUGUST 10, 1927 IN BOOK 6697 PAGE 399, OFFICIAL RECORDS  
 AFFECTS: PARCEL 2.

K-17

SCHEDULE 5  
(continued)

J 9. COVENANTS, CONDITIONS AND RESTRICTIONS (DELETING THEREFROM ANY RESTRICTIONS BASED ON RACE, COLOR OR CREED) AS SET FORTH IN THE DOCUMENT REFERRED TO IN THE NUMBERED ITEM LAST ABOVE SHOWN.

K 10. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

GRANTED TO:	CHARLES YAGER
PURPOSE:	STREET PURPOSES TO BE USED IN COMMON WITH OTHERS
RECORDED:	AUGUST 10, 1927 IN BOOK 6764 PAGE 136, OFFICIAL RECORDS
AFFECTS:	PARCEL 2.

L 11. A NOTICE OF VIOLATION

DATED:	JUNE 24, 1992
EXECUTED BY:	DEPARTMENT OF REGIONAL PLANNING
RECORDED:	JUNE 24, 1992 AS INSTRUMENT NO. 92-1150421

M 12. ANY CLAIM, WHICH ARISES OUT OF THE TRANSACTION VESTING IN THE INSURED THE ESTATE OR INTEREST INSURED BY THIS POLICY, BY REASON OF THE OPERATION OF FEDERAL BANKRUPTCY, STATE INSOLVENCY, OR SIMILAR CREDITORS, RIGHTS LAWS.

N 13. ANY RIGHTS OF THE PARTIES IN POSSESSION OF SAID LAND, BASED ON ANY UNRECORDED LEASE, OR LEASES.  
THE COMPANY WILL REQUIRE THAT A FULL COPY OF ANY UNRECORDED LEASE BE SUBMITTED TO US, TOGETHER WITH ALL SUPPLEMENTS, ASSIGNMENTS AND AMENDMENTS, BEFORE ISSUING ANY POLICY OF TITLE INSURANCE.

O 14. MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION OR BY A SURVEY OF SAID LAND THAT IS SATISFACTORY TO THIS COMPANY, OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.

P 15. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS.

Q NOTE NO. 1: WHEN THIS TITLE ORDER CLOSES AND IF CHICAGO TITLE IS HANDLING LOAN PROCEEDS THROUGH SUB-ESCROW, ALL TITLE CHARGES AND EXPENSES NORMALLY BILLED, WILL BE DEDUCTED FROM THOSE LOAN PROCEEDS (TITLE CHARGES AND EXPENSES WOULD INCLUDE TITLE PREMIUMS, ANY TAX OR BOND ADVANCES, DOCUMENTARY TRANSFER TAX AND RECORDING FEES, ETC.).

R NOTE NO. 2: IF THIS COMPANY IS REQUESTED TO DISBURSE FUNDS IN CONNECTION WITH THIS TRANSACTION, CHAPTER 598, STATUTES OF 1989 MANDATES HOLD

SCHEDULE 5  
(continued)

PERIODS FOR CHECKS DEPOSITED TO ESCROW OR SUB-ESCROW ACCOUNTS. THE MANDATORY HOLD PERIOD FOR CASHIER'S CHECKS, CERTIFIED CHECKS AND TELLER'S CHECKS IS ONE BUSINESS DAY AFTER THE DAY DEPOSITED. OTHER CHECKS REQUIRE A HOLD PERIOD OF FROM THREE TO SEVEN BUSINESS DAYS AFTER THE DAY DEPOSITED. IN THE EVENT THAT THE PARTIES TO THE CONTEMPLATED TRANSACTION WISH TO RECORD PRIOR TO THE TIME THAT THE FUNDS ARE AVAILABLE FOR DISBURSEMENT (AND SUBJECT TO COMPANY APPROVAL), THE COMPANY WILL REQUIRE THE PRIOR WRITTEN CONSENT OF THE PARTIES. UPON REQUEST, A FORM ACCEPTABLE TO THE COMPANY AUTHORIZING SAID EARLY RECORDING MAY BE PROVIDED TO ESCROW FOR EXECUTION.

S NOTE NO. 3: THERE ARE NO CONVEYANCES AFFECTING SAID LAND, RECORDED WITHIN SIX (6) MONTHS OF THE DATE OF THIS REPORT.

T NOTE NO. 4: THE CHARGE FOR A POLICY OF TITLE INSURANCE, WHEN ISSUED THROUGH THIS TITLE ORDER, WILL BE BASED ON THE BASIC (NOT SHORT-TERM) TITLE INSURANCE RATE.

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**SCHEDULE 6: LIENS AND ENCUMBRANCES ON  
EQUIPMENT**

There are no current liens or encumbrances on any of the Equipment.

## **SCHEDULE 7: LIST OF EMPLOYEES**

Doerr, Robert F.  
Miller, Gregory L.  
Shook, David M.  
Doll, Robert E.  
English, Nathaniel  
Medlock, Jamie R.  
Parker, Roosevelt  
Saulmon, Billie  
Stinson, Donald

Quijano, Philip E.  
San, Merri A.  
Eldridge, Argle  
Bray, Leonard A.  
Gomez, Fortino  
McCrossan, Frank  
Patterson, Robert  
Martin, Abrom  
Uvaas, Matthew

**SCHEDULE 8**  
**Groundwater Baseline for Real Property**

**A. Background**

The groundwater has been monitored for the presence of substances, contaminants and other materials (herein referred to as "substances") at the Real Property from six wells for nearly three years. This report describes the methods and results which will comprise the groundwater baseline for the Real Property.

**B. Data**

Over a three year period from February 1990 to October 1992, six samples were collected from each of six different monitoring wells. Attachment A shows the location of the wells. Reports made to Amoco by its environmental consultant contained tables for 12 substances that were detected at some time during the monitoring period in at least one well. Only 7 of these substances were detected in the final sampling done prior to Closing, October 20, 1992, in any of the wells, i.e.:

1,1-dichloroethene (1, 1 DCE)  
1,2-dichloroethene (1, 2 DCE)  
trichloroethene (TCE)  
tetrachloroethene (PCE)  
methylene chloride (M Cl)  
chlorobenzene  
chloroform

Current data for this baseline analysis is 6 samples for each of the 7 detected substances with single analyses and samples only for most of the wells. Any duplicates were averaged.

**C. Sampling Methodology**

Groundwater sampling was conducted on the six groundwater monitoring wells located onsite consistent with the methods described in Attachment C.

Groundwater samples were analyzed using EPA method 624 for purgeable compounds.



D. Data Analysis Strategy

For each substance and well, six samples were available. The levels of substances found in the groundwater vary from one sample to the next. Some or all of the data points could be nondetect for any measurement and well. Data analysis was done separately for each of the seven detected substances and for each of the six monitoring wells. The Estimated Levels in the following table are the median or 50% value. However, for purposes of the groundwater baseline, the values which are approximately two standard deviations above the Estimated Levels are the Baseline Level for each well. Details of the statistical analysis utilized to determine the Baseline Levels from this data are presented in Attachment B.

Based on pre-Closing sampling, the groundwater baseline is set forth in the final column of the following table:

<u>Well</u>	<u>Substance</u>	<u>Estimated *</u> <u>Level</u>	<u>Baseline *</u> <u>Level</u>
OW-1	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	nd nd 1.75 0.14 237 nd 0.067	nd nd 2.60 0.39 2316.81 nd 0.23
OW-2	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	nd 0.054 3.2 0.52 0.01 nd 0.031	nd 0.15 4.09 0.68 0.43 nd 0.08
OW-3	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	0.008 0.035 2.36 0.36 0.017 nd nd	0.03 0.09 3.74 0.79 0.05 nd nd
OW-4	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	0.049 0.31 4.32 1.37 nd nd 0.013	0.08 0.43 10.02 1.81 nd nd 0.17
OW-5	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	0.19 0.77 13.6 5.8 nd nd 0.04	0.25 0.98 24.48 16.32 nd nd 0.10
OW-6	1,1 DCE 1,2 DCE TCE PCE M CI Chlorobenzene Chloroform	0.03 0.41 30.3 13.8 nd 0.01 0.03	0.11 0.91 45.31 20.31 nd 0.88 0.15

\* Concentrations in milligrams per liter (ppm)  
nd = not detected

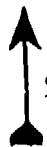
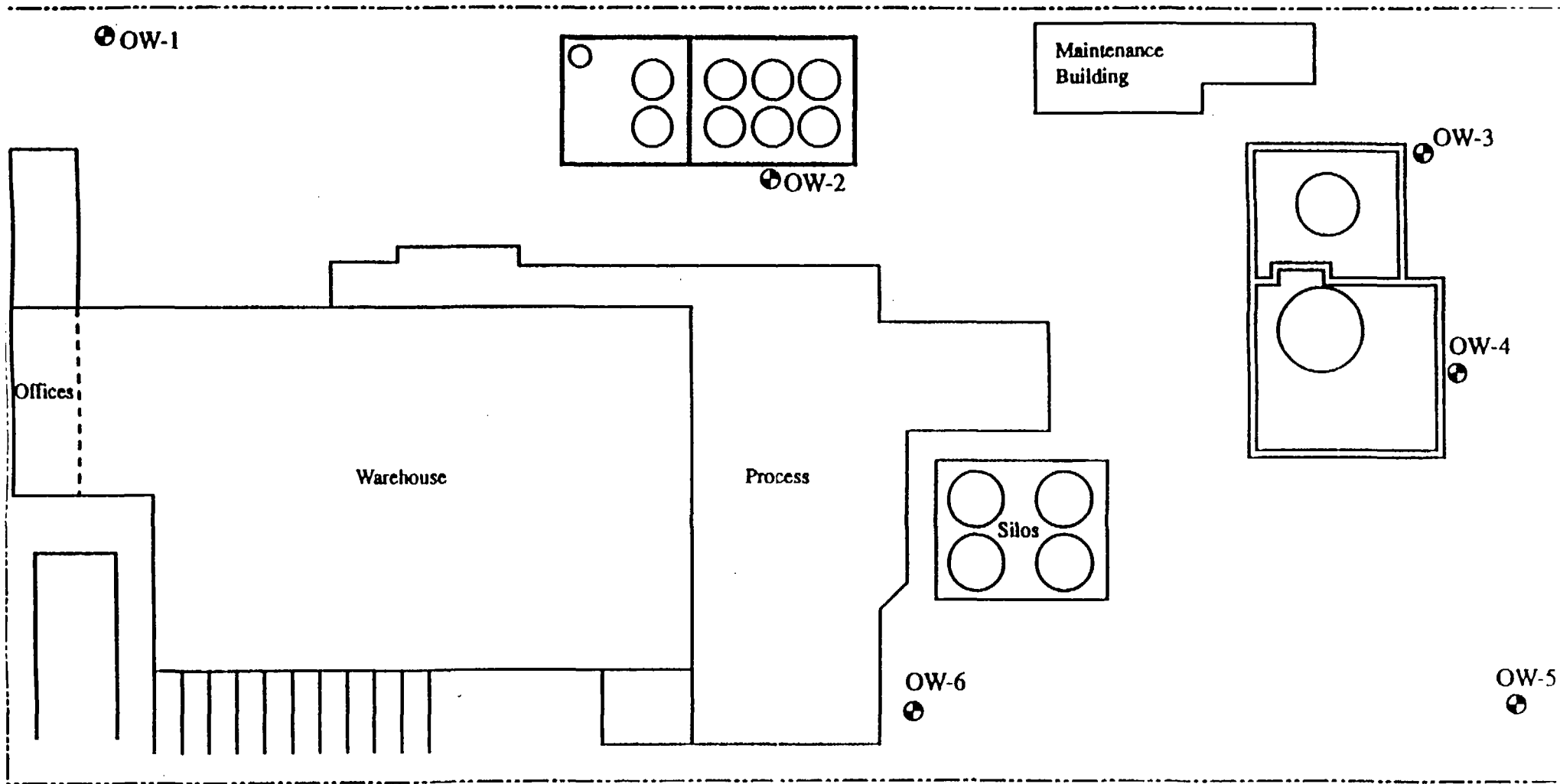
E. Additional Groundwater Sampling

Buyer may conduct one additional round of groundwater sampling (one sample from each of the six wells) after Closing and have the data resulting from such sampling become part of the Baseline Level for each well, subject to the following conditions:

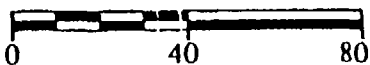
1. Any such sampling shall be conducted within two (2) months after Closing, and shall be conducted prior to any release, discharge, disposal or emission of any substance, contaminant or other material into the ground or groundwater after Closing by Buyer or related to Buyer's activities. Data from any samples taken later than two (2) months after Closing, or taken after any release, discharge, disposal or emission of any substance, contaminant or other material into the ground or groundwater after Closing by Buyer or related to Buyer's activities, shall not be part of the Baseline Levels.
2. Buyer shall propose to Amoco an independent environmental contractor or consultant to conduct any such sampling, and subject to Amoco's prior written approval of such contractor or consultant, not to be unreasonably withheld, Buyer shall hire same.
3. The costs of any such sampling and of any such environmental contractor or consultant shall be borne as follows:
  - a. up to the first \$10,000 of any such costs shall be borne by Buyer.
  - b. up to the next \$10,000 of any such costs shall be borne equally by Amoco and Buyer.
  - c. any such costs in excess of \$20,000 shall be borne by Buyer.
4. Any such sampling shall be conducted in accordance with Attachment C.
5. Data resulting from any such sampling shall become part of the groundwater Baseline Levels in accordance with Attachment D.
6. If Buyer does not conduct additional sampling in accordance with the above conditions, then the groundwater baseline shall be as set forth in the final column of the table on the preceding page.

BPACC00138

Attachment A



N



Scale in feet

● OW-3 Monitoring Well

Monitoring Well Locations

**Amoco Chemical Company**  
**Polystyrene Facility**  
 1225 West 106th Street



## Attachment B

### Details of Statistical Analysis

For all data analyses, models are based on the logarithm of the measured substance value with normally distributed errors assumed for the logarithms. This is standard practice in the analysis of groundwater data. The configuration of the data relative to the nondetects led to the following possible situations for reporting the groundwater baseline for any substance and any well.

#### All Measurements Nondetect

No statistics can be estimated, so an estimated level cannot be determined. The substance is reported as nondetect and the Baseline Level is nondetect.

#### All But One Measurement Nondetect

As with the preceding case the substance is nondetect, because statistical estimation procedures will not give results unless there are at least two quantifiable values. However, if the quantifiable value is the last sample, then the value for the last sample is reported as both the Estimated Level and the Baseline Level.

#### Two Quantifiable Samples

For this situation, estimation of the Estimated Level, or 50% point, of the substance and a statement of the Baseline Level (the level that is approximately two standard deviations above the Estimated Level) can both be done using quantiles of the lognormal distribution as fitted to the data.

#### Three or More Quantifiable Points

If all the samples for a substance are quantifiable, usual straight line curve fitting is done for the log of the substance versus the log of time. If the slope of the line is significant with 95% confidence, then the fitted value for the last sample is reported as the Estimated Level, and the level that is approximately two standard deviations above the Estimated Level is reported as the Baseline Level. If the slope is not significant, the median or 50% point for the data is reported as the Estimated Level of the substance and a normal distribution statistic is used to report the Baseline Level, as for two quantifiable points.

If there are one or more nondetects, then maximum likelihood estimation is used. However, the methods for reporting remain the same, with a lognormal distribution statistic again as the basis for the 50% and the level that is approximately two standard deviations above the Estimated Level reported as the Baseline Level.

## Attachment C

### Torrance Sampling Procedures

1. Prior to purging or bailing a well, the depth to water shall be measured to the nearest 0.01 ft., and total depth of the well shall be measured to calculate the volume of water within the well bore.
2. Temperature, electrical conductivity, and Ph shall be measured during the purging process. Each well shall be purged of 5 well volumes or until 3 well volumes have been purged and 3 consecutive physical measurements have stabilized to within 10 percent of one another before sampling.
3. After purging, a recovery period shall be allowed, but sampling shall occur no later than 48 hours after purging.
4. Samples shall be collected using disposable Teflon bailers fitted with controlled flow emptying devices.
5. Samples shall be collected into laboratory clean glass vials having lids with Teflon lined septa and containing hydrochloric acid as a preservative.
6. Samples shall be transferred from the bailer to the vials using the submerged fill technique.
7. Lids shall be replaced on the vials and the vials shall be inverted and visually checked for the presence of air bubbles. Samples containing air shall be uncapped, refilled and rechecked.
8. An equipment blank shall be collected prior to sampling one well by pouring distilled water into a clean bailer and then decanting the water into sample vials.
9. A trip blank shall be provided by the laboratory and shall accompany the sample vials during the sampling event.

Torrance Sampling Procedures (cont'd)

10. Samples not containing air shall have labels affixed which contain the following information: date, sampler's initials, job number, well number, sample number and requested analyses. Appropriately sealed and labeled samples shall be placed in an ice chest chilled to 4°C for transport to the analytical laboratory.
11. Chain-of-custody forms shall be completed in the field and shall accompany the samples to the laboratory.
12. Bailers shall be properly discarded after use at each well.
13. Samples shall be analyzed using EPA method 624 for purgeable compounds for only the seven substances, contaminants or other materials detected in the October 20, 1992 sampling, i.e.:
  - 1,1-dichloroethene (1,1 DCE)
  - 1,2-dichloroethene (1,2 DCE)
  - trichloroethene (TCE)
  - tetrachloroethene (PCE)
  - methylene chloride (M Cl)
  - chlorobenzene
  - chloroform
14. Copies of any sampling reports shall be made immediately available to both parties.

## Attachment D

### Data Analysis for Inclusion of an Additional Sampling

This attachment summarizes the methodology through which data from additional samples from wells OW-1 through OW-6 taken pursuant to paragraph E of Schedule 8 shall be added to the data that was used for the statistical analysis that is embodied in the table on page 3 of Schedule 8, to arrive at a Baseline Level for each well. Figure 1 contains the data used in arriving at the table on page 3 of Schedule 8 and the associated data structure. There are two possible types of impact on the data structure from including an additional sample:

#### **Additional Sample is "Nondetect"**

The data for the substance will have the same structure, as categorized in Attachment B of Schedule 8, that the substance had for the data analysis that is embodied in the table on page 3 of Schedule 8. The same analysis will be repeated to generate new Estimated Levels and Baseline Levels.

#### **Additional Sample is "Detect"**

The data for the substance will have the next structure down the list of structures that are categorized in Attachment B from the structure that the substance had for the data analysis that is embodied in the table on page 3 of Schedule 8. The data analysis appropriate to that structure will be used to determine new Estimated Levels and Baseline Levels.

### **Mechanics of Data Analysis**

Data analysis described in Attachment B is done by programming the application of several procedures in the statistical analysis package, SAS. The computer program is listed in Attachment E. There are two possible analyses types, (1) nondetects and detects mixed, and (2) all results detects. If nondetects and detects are both present, there are two possible data analysis methodologies: (1) trend estimation (as described in Attachment B) feasible, and (2) no trend estimation possible. The three possibilities for data analysis are:

#### **(1) nondetects and detects mixed, no trend estimation**

PROC LIFEREG is used to do estimation of lognormal distribution parameters and to calculate quantiles. Quantiles are adjusted to compensate for the small sample size used to estimate the average and standard deviation by reducing the quantile level by the ratio of a normal distribution statistic to the t-statistic to remove the small sample size effect.

#### **(2) nondetects and detects mixed, trend estimation**

PROC LIFEREG is used as above except a time variable in days is added to the model.



(3) all data detects

PROC REG is used to do the trend analysis, and PROC MEANS is used to calculate the estimated level and the standard deviation for use in determining quantiles when trend is not significant.

Figure 1

Well	Date of Sampling	1,1 DCE	1,2 DCE	TCE	PCE	M CI	Chloro-benzene	Chlor for
OW-1	02-01-90	<.08	<.080	1.00	<.080	10	<.080	<.08
OW-1	02-21-90	<1.5	<1.50	2.20	<1.50	190	<1.50	<1.5
OW-1	12-05-90	<1.0	<1.00	2.00	<1.00	320	<1.00	<1.0
OW-1	06-20-91	<5.0	<5.00	<5.00	<5.00	1100	<5.00	<5.0
OW-1	01-16-92	.008	.060	2.20	.190	1000	<.003	.03
OW-1	10-20-92	<.008	<.060	1.70	.290	270	<.003	.23
OW-2	02-01-90	<.004	<.004	.56	.058	<.020	<.004	<.00
OW-2	02-21-90	<.005	.006	1.10	.160	<.025	<.005	<.00
OW-2	12-05-90	<.010	.056	3.00	.420	<.050	<.010	.02
OW-2	06-20-91	<.020	.032	2.70	.400	<.010	<.020	<.02
OW-2	01-16-92	<.003	.031	2.70	.424	.153	<.003	.01
OW-2	10-20-92	<.008	.027	2.30	.380	.400	<.003	.02
OW-3	02-01-90	<.015	.054	1.70	.240	<.075	<.015	<.01
OW-3	02-21-90	.035	.015	3.80	1.100	<.100	<.020	<.02
OW-3	12-05-90	<.020	.073	2.60	.290	<.100	<.020	<.02
OW-3	06-20-91	<.020	<.020	1.90	.270	<.100	<.020	<.02
OW-3	01-16-92	.008	.059	3.20	.430	.007	<.003	.00
OW-3	10-20-92	<.008	.041	1.70	.230	.048	<.003	<.00
OW-4	02-01-90	.017	.064	1.40	.310	<.050	<.010	<.01
OW-4	02-21-90	<.015	.087	3.40	.400	<.075	<.015	<.01
OW-4	12-05-90	.054	.330	7.20	1.600	<.125	<.025	<.02
OW-4	06-20-91	<.050	.360	7.80	1.000	<.250	<.050	<.05
OW-4	01-16-92	.033	.190	5.50	1.300	.005	<.003	.01
OW-4	10-20-92	.044	.210	4.40	.920	<.040	<.003	.02
OW-5	02-01-90	.063	.200	5.80	1.600	<.200	<.040	<.04
OW-5	02-21-90	.114	.380	15.49	5.490	<.400	<.080	<.08
OW-5	12-05-90	<.100	.670	21.00	8.100	<.500	<.100	<.10
OW-5	06-20-91	<.200	.900	15.00	6.600	<1.000	<.200	<.20
OW-5	01-16-92	.150	.560	14.00	5.000	.006	<.003	.03
OW-5	10-20-92	.200	.590	16.00	17.000	<.200	<.003	.11
OW-6	02-01-90	.021	.021	1.90	.780	<.075	<.015	<.01
OW-6	02-21-90	.056	.059	7.80	3.300	<.040	2.800	<.04
OW-6	12-05-90	<.100	.270	27.00	11.000	<.100	<.100	<.10
OW-6	06-20-91	<.200	<.200	22.00	10.000	<1.000	<.200	<.20
OW-6	01-16-92	.130	.300	21.00	9.400	<.005	<.003	.06
OW-6	10-20-92	<.020	.280	21.00	10.000	<.200	.006	.14

Concentrations reported in milligrams per liter (ppm)

<.08 (e.g.) = not detected at or above concentration indicated

Attachment E  
Listing of SAS Program

```
%LET WELL=6;
%LET CHEMNUM= 7;
%let chems=%str(1,DCE : 1,2DCE : TCE : PCE : MCl :
    Chloro-Benzene : Chloroform);

%macro program; * %datgen;                      /* Run ONCE to set up the data
for analysis */ * %TREND;
    %NOTIME; * %NOND; %mend program;

%let vars=dce11 dce12 tce pce mc chbnz chlor;
%let chem=%scan(&chems, &chemnum, ":");
%let var=%scan(&vars, &chemnum, " ");

options ls=71;
title1 "Fitting Straight Line to Left Censored Data by PROC LIFEREG";
title2 "OW-&well for &chem";

data datain;
    set data607.stark;
    if well="OW&well";
    keep date well &var._1 &var._2;

proc print data=datain;
    title3 "Input Data File Listing";
run;

    /*--- Do this part only if trend testing is reasonable ---*/
%macro trend;
proc lifereg data=datain outest=coeffs;
    model (&var._1, &var._2) = date /
        distribution=lnormal corrb covb;
    output out=preds cdf=cumdist p=quant q=.5,.9,.95
        std=quant_se xbeta=pred_mod;
title3 "PROC Lifereg Output";
title4 "Date Effect Version";

proc print data=coeffs;
    TITLE4 "OUTPUT ESTIMATES DATA SET WITH PARAMETER ESTIMATES ";

proc print data=preds;
    title4 "Output Data Set Information from PROC Lifereg"; %mend trend;

/*----- This part does estimation without regard for time -----*/
```

```

%macro notime;
proc lifereg data=datain outest=coeffs;
  model (&var._1, &var._2) = /
    distribution=lnormal corrb covb;
  output out=preds cdf=cumdist p=quant q=.5,.9,.95
    std=quant se xbeta=pred mod;
  title4 "No Date Effect Version";

proc print data=coeffs;
  title4 "Output Estimates Data Set with Parameter Estimates";
;

proc print data=preds;
  title4 "Output Data Set Information from PROC Lifereg"; %mend notime;

%MACRO NOND; DATA DATAMEAN;
  SET DATAIN;
  LOGVAR=LOG(&VAR. 1);
  LOGTIME=LOG(&DATE); RUN;

PROC REG DATA=DATAMEAN;
  MODEL LOGVAR=LOGTIME/P R CLM;
  OUTPUT OUT=LOGLOG PRED=LLEVEL STDP=STDERR;
  TITLE4 "NO NONDETECT DATA, TREND VERSION";

DATA LINE;
  SET LOGLOG;
  LEVEL=EXP(LLEVEL);
  U_95=EXP(LLEVEL+(1.645*STDERR)); RUN;

PROC PRINT;
  VAR LEVEL U_95;

PROC MEANS;
  VAR LOGVAR;
  OUTPUT OUT=LOGSTATS MEAN=MU STD=SIGMA;
  TITLE4 "NO NONDETECT DATA, CALCULATE STATISTICS";

DATA RESULTS;
  SET LOGSTATS;
  LEVEL=EXP(MU);
  U_95=EXP(MU+1.645*SIGMA);
  RUN;

PROC PRINT;
  VAR LEVEL U_95;
  TITLE4 "NO NONDETECT DATA, REPORTED RESULTS IF NO TREND";

%MEND NOND;

```

```

%macro datgen;
  filename indat 'stark data a';
  data datain;
    infile indat firstobs=3;
    informat well $3. _dce11 _dce12 _tce _pce _mc _chbnz _chlor $5.;
    input well date _dce11 _dce12 _tce _pce _mc _chbnz _chlor;
    %do v=1 %to 7;
      %let var=%scan(&vars, &v, " ");
      if substr(_&var, 1, 1)='<' then do;
        &var._1 = .;
        &var._2 = substr(_&var, 2, 4) + 0;
      end;
      else do;
        &var._1 = _&var + 0;
        &var._2 = &var._1;
      end;
    %end;

  proc print u;
    var well date _dce11 _dce12 _tce _pce _mc _chbnz _chlor;

    title3 "Original Data";

  proc print u;
    var well date dce11_1 dce11_2 dce12_1 dce12_2 tce_1 tce_2 pce_1 pce_2;
    title3 "Data as Prepared for PROC LIFEREG";

  proc print u;
    var well date mc_1 mc_2 chbnz_1 chbnz_2 chlor_1 chlor_2;

  data data607.stark;
    set datain;

%mend datgen;

%program;

```

## **SCHEDULE 9: LIST OF MATERIAL CONTRACTS**

Polystyrene Agreement made as of December 1, 1991 by and between Amoco and Setco, Incorporated.

Contract between Amoco and Eldon-Rubbermaid for sale and purchase of polystyrene from 1/1/93 - 12/31/93.

Contract between Amoco and Scott Food Service/Wincup for sale and purchase of polystyrene from 7/1/91 - 12/31/93.

Contract between Amoco and Comet California Cutlery for sale and purchase of polystyrene from 1/1/93 - 12/31/93.

Product Supply Agreement (bulk nitrogen) between Union Carbide Corporation and Amoco, dated April 2, 1973.

## **SCHEDULE 10: NOTICES OF VIOLATION**

On March 23, 1993, the National Labor Relations Board sent notice to Amoco of the filing of a charge by the International Chemical Workers Union, Local 1, alleging the commission of unfair labor practices in connection with Amoco's Torrance facility.

**SCHEDULE 11: NOTICES OF REAL PROPERTY  
EXCEPTIONS**

None.



## SITE ACCESS AND LICENSE AGREEMENT

THIS AGREEMENT is made and entered into by and between Amoco Chemical (hereinafter known as "Owner") whose address is 1225 West 196th Street, Torrance, California, 90502, and the Del Amo Participating Parties (hereinafter known as "Participating Parties"), an unincorporated association, whose address is c/o W.J. Duchie, 511 N. Brookhurst, Anaheim, California, 92803, acting through their agents, employees, contractors and subcontractors, including without limitation Dames & Moore, Inc. whose address is 175 Cremona Drive, Suite A, Goleta, California, 93117.

## WITNESSETH:

WHEREAS, Owner holds fee simple title to certain parcel(s) of real property located in Los Angeles County, California, which is described in Schedule A and which is attached and made a part of this Agreement (the "Property"); and

WHEREAS, the Property is located near an area commonly known as the Del Amo Plant Site (hereafter referred to as the "Site"), which is the subject of a Remedial Investigation/Feasibility Study or Focused Feasibility Study ("RI/FS") being conducted by Participating Parties in connection with the Site; and

WHEREAS, in connection with conducting the RI/FS for the Site, the Environmental Protection Agency ("EPA") has required that certain investigations, including without limitation, soil borings and sampling, the monitoring of the surface and ground water, and other similar surveys or engineering studies, must be conducted on the Site and nearby including the Property (Activities"); and

WHEREAS, the Del Amo Participating Parties and Dames & Moore and their subcontractors have been authorized to conduct certain RI/FS activities pursuant to an Administrative Order on Consent, U.S.E.P.A. Docket No. 92-13, (the "AOC") with the EPA.

00216-337/Amoco2.agr

NOW, THEREFORE, in consideration of the mutual obligations, representations, and promises contained in this Agreement, Owner and Participating Parties hereby agree as follows:

1. Owner hereby grants Participating Parties a temporary license to enter upon the Property for purposes of conducting the work tasks required under the RI/FS or Work Plan (the "Work Plans") and the AOC including any modifications thereto to be conducted on the Property as described in the mutually agreed upon workplan specific to the property set forth in Schedule B which is attached and made a part of this Agreement. The license to enter shall continue in force until the work specified in Schedule B is completed.

2. In connection with conducting the Activities, Owner hereby agrees that Participating Parties may bring onto the property such equipment or machinery as may be reasonably necessary to conduct the RI/FS and to take surface and subsurface soil and water samples required by the Work Plans and may install wells as may be required under the Work Plans or the AOC and identified in Schedule B.

3. Participating Parties shall conduct the Activities required by the Work Plan and Schedule B at the Property during normal business hours and without interference with Owner's business or the businesses of Owner's lessees. Participating Parties shall give Owner at least five days notice prior (ten days for sampling) to conducting any activities on the Property, including locations and times at which the activities will take place, except that Participating Parties may take samples not previously anticipated when unexpected circumstances occur in the course of work pursuant to Schedule B. In all cases, Owner shall be entitled to a split sample of all samples taken on Owner's Property. Participating Parties shall require all personnel involved in activities at the Property to sign in with Owner's security personnel, if any, when entering the Property and to sign out when leaving the Property. Participating Parties' personnel authorized to have access to the Property under this Agreement shall include EPA and the State and their employees and authorized representatives for purposes of conducting oversight of Participating Parties' activities in accordance with the requirements of the AOC.

00216-337/Amoco2.agr

4. Participating Parties agree to maintain its equipment and other materials in an orderly manner while they are located on the Property and to remove all debris, trash, equipment, waste and other materials used or caused by Participating Parties when each activity on the Property is completed. Upon completion of each activity on the Property, Participating Parties shall leave the Property in the same condition as before the activity began, to the extent possible, except for any monitoring wells or other items that are required by the Work Plan and Schedule B to remain in place for an extended period of time. Wells no longer required by the Work Plan and Schedule B shall be properly plugged and abandoned in accordance with applicable regulations.

5. Participating Parties agree to indemnify, save and hold Owner harmless against all losses, costs, expenses and damages suffered or incurred by Owner, Owner's lessees and the officers, directors, employees and agents of Owner and of Owner's lessees caused by the negligence or wrongful conduct of Participating Parties, their contractors, or subcontractors, employees and agents in performing activities on the property, including any of the work set forth in Schedule B.

6. The Participating Parties shall, during the term of this Agreement and at all times during which access is available to them, require all contractors or subcontractors performing the Activities described in this Agreement, and their employees and agents, to maintain insurance with the following coverage:

Workman's Compensation with statutory limits,

Automobile Liability with \$1,000,000 single limit or equivalent, and

Comprehensive General Liability, including contractor liability covering contractor's obligations set forth in Paragraph 5., with \$1,000,000 single limit or equivalent;

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and shall, upon request, furnish to Owner prior to entering onto the Property policies or certificates of insurance evidencing such coverage.

7. Owner and any lessees, licensees or agents or Owner agree not to prohibit, interfere with or obstruct such entry or Activities upon the Property, and not to cause or permit interference or obstruction by others.

8. Owner agrees that the temporary license to enter hereby granted Participating Parties is binding upon both itself and any present or future lessees, occupants or owners of the Property and that Owner will make any grant of rights to such lessees, occupants or owners subject to Participating Parties' license to enter.

9. Participating Parties agree that entry upon the property shall be limited to the extent necessary or desirable for the performance of the Activities undertaken by Participating Parties for the purposes expressed in this Agreement.

10. This Agreement is intended and shall be construed as a temporary license to enter and conduct the Activities upon the Property and not as a grant of easement or any other interest in the Property.

11. This Agreement shall be binding upon the parties to this Agreement and their respective successors, representatives, heirs and assigns.

12. The terms of this Agreement shall be construed pursuant to the laws of the State of California.

13. Owner shall be furnished at no cost with copies of all raw data and all reports concerning Owner's Property including any sampling or analytical data generated by Activities on the Property at the time such data and reports are generated.

14. Owner may designate part or all of its polystyrene manufacturing process as confidential-trade secret, and access may be denied to Participating Parties or access may be granted pursuant to a written confidentiality agreement, at the option of Owner.

00216-337/Amoco2.agr

IN WITNESS HEREOF, the parties have executed this Agreement on the date set forth below their respective signatures.

OWNER:  
AMOCO CHEMICAL COMPANY

By: Ronald G. Manion

DATE: 9/16/92

PARTICIPATING PARTIES:

[Signature]

DATE: 9/31/92

00216-337/Amoco2.agr

BPACC00156

**SCHEDULE A**

The Property is further described as:

Amoco to provide legal description.

00216-337/Amoco2.agr

**BPACC00157**

**SCHEDULE B**

**WORK PLAN FOR AMOCO TORRANCE PLANT**

00216-337/schd.B

**BPACC00158**

This deed is executed and delivered subject to the following:

1. (i) All easements, covenants, conditions, assignments, restrictions, mechanics liens, and reservations of records; (ii) all building, zoning, and other applicable ordinances and regulations of any municipal, county, state or federal authority having jurisdiction on the Premises which are not violated by the existing structures; (iii) the lien for real property taxes for the year in which conveyance occurs provided they are due or payable; (iv) all encroachments, overlaps, and other matters which would be disclosed by an accurate current survey; (v) minor title defects or liens consisting of minor survey exceptions and other unrecorded easements or rights of way or other restrictions as to the use of the Premises provided the same does not render title unmarketable; (vi) such facts as would be revealed by an inspection of the Premises; and (vii) the general or standard printed exceptions and exclusions usually contained in commitments for title insurance.
2. Grantor specifically makes no warranty or representation as to the condition of the Land or its fitness for any particular purpose, or its environmental condition or freedom from hazardous waste, flammable, explosive or toxic materials. Grantee has made its own inspection of the Land and relies solely upon the results of said inspection without any reliance whatsoever on any acts or representations of Grantor, its employees or agents whatsoever. Accordingly, Grantee expressly releases Grantor from all claims of every kind or nature arising by reason of, or in connection with, the ownership, possession, handling or use of said land and agrees to defend, indemnify and hold Grantor harmless from and against any and all claims, demands, causes of action, losses, damages, costs or expenses of any kind whatsoever, (including without limitation, attorneys' fees) by any person, arising from or in any way connected with the ownership, possession, handling or use of the Land, including claims for which Grantor is held strictly liable and/or claims for which Grantor is held partly or wholly at fault.

Dated \_\_\_\_\_

STATE OF CALIFORNIA        }  
COUNTY OF                    } ss.  
                                  }  
                                  }

By \_\_\_\_\_  
President

On \_\_\_\_\_  
before me, the undersigned, a Notary Public in and  
for said State, personally appeared \_\_\_\_\_

By \_\_\_\_\_  
Secretary

known to me to be the \_\_\_\_\_  
President, and \_\_\_\_\_  
known to me to be the \_\_\_\_\_  
Secretary of the corporation that executed the within



Order No.  
Escrow No.  
Loan No.

WHEN RECORDED MAIL TO:

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

DOCUMENTARY TRANSFER TAX \$.....  
.... Computed on the consideration or value of property conveyed; OR  
.... Computed on the consideration or value less liens or encumbrances  
remaining at time of sale.

Signature of Declarant or Agent determining tax -- Firm Name

## SPECIAL WARRANTY DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

a corporation organized under the laws of the State of \_\_\_\_\_, does hereby

GRANT to

the real property in the City of \_\_\_\_\_, State of California, described as  
County of \_\_\_\_\_

### PARCEL 1:

The easterly 258 feet of the westerly 467 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

### PARCEL 2:

The northerly 12-1/2 feet of the easterly 258 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

### PARCEL 3:

A nonexclusive easement for ingress and egress for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

BPACC00160

EXHIBIT B  
BILL OF SALE

BILL OF SALE, dated \_\_\_\_\_, 1993 from AMOCO CHEMICAL COMPANY, a Delaware corporation (the "Seller"), to SMG INDUSTRIES, INC., a California corporation (the "Buyer").

W I T N E S S E T H:

WHEREAS, pursuant to the Agreement for Sale and Purchase of Assets, made \_\_\_\_\_, 1993 (the "Sale Agreement"), between the Seller and the Buyer, the Seller has agreed to sell, assign, transfer and deliver to the Buyer, and the Buyer has agreed to purchase, acquire and accept, certain assets of the Seller described in Section 1.1(b) and (c) of the Sale Agreement (the "Purchased Assets");

WHEREAS, the Seller is executing and delivering this Bill of Sale to the Buyer for the purpose of selling, assigning, transferring and conveying to, and vesting in, the Buyer all of Seller's right, title and interest in all of the Purchased Assets, subject to the security interest in Inventories (as such term is defined in the Sale Agreement) provided for in the security agreement executed and delivered pursuant to Section 4.3(d) of the Sale Agreement (the "Security Agreement");

WHEREAS, simultaneously with such sale and pursuant to due authorization, the Buyer has paid the amount contemplated by Section 4.2 of the Sale Agreement; and

WHEREAS, Amoco is being granted a security interest in the Inventories pursuant to the Security Agreement, in order to secure any payment required by Buyer under Section 4.3 of the Sale Agreement for Working Capital;

NOW, THEREFORE, in consideration of the premises and the sum of Ten Dollars (\$10) and other good and valuable consideration, receipt of which is hereby acknowledged, the Seller by these presents does bargain and sell, assign,

transfer, convey and deliver to, and vest in, the Buyer, its successors and assigns forever, all of the Seller's right, title and interest, legal and equitable, in and to the Purchased Assets, subject to the liens and encumbrances listed in Schedule 6 of the Sale Agreement, and subject to the security interest in Inventories provided for in the Security Agreement:

(a) the Equipment as described in Section 1.1(b) of the Sale Agreement;  
and

(b) the Working Capital as described in Section 1.1(c) of the Sale Agreement.

PROVIDED, HOWEVER, that there shall be excluded from the Purchased Assets sold, assigned, transferred and delivered to the Buyer under this Bill of Sale, all assets and properties described as Excluded Assets in Section 1.2 of the Sale Agreement.

TO HAVE AND TO HOLD all such Purchased Assets unto the Buyer, its successors and assigns, forever.

This Bill of Sale is an instrument of transfer contemplated by, and is executed pursuant to, the Sale Agreement, and nothing contained herein shall be deemed to modify any of the provisions of the Sale Agreement or any rights or obligations of the parties under the Sale Agreement.

Seller for itself, its successors and assigns, hereby covenants and agrees that, at reasonable times and from time to time forthwith upon the reasonable request of the Buyer, the Seller will do, execute, acknowledge and deliver or cause to be done, executed, acknowledged and delivered, all such further acts, deeds, instruments, transfers and assurances as may be reasonably requested by the Buyer in order to assign, transfer, set over, convey, assure and confirm unto, and vest in, the Buyer, its successor and assigns, any or all of the Purchased Assets assigned to the Buyer, subject to the aforementioned liens, encumbrances and security interest.

This Bill of Sale is executed by the Seller and shall be binding upon the Seller, its successors and assigns, for the uses and purposes above set forth and

referred to, as of the date hereof.

IN WITNESS WHEREOF, the Seller has caused this Bill of Sale to be executed by its duly authorized officer on the day and year first above written.

(SEAL)

AMOCO CHEMICAL COMPANY

Attest: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT C

ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS AGREEMENT is made this \_\_\_\_ day of \_\_\_\_\_, 1993, by and between AMOCO CHEMICAL COMPANY, a corporation organized and existing under the laws of the State of Delaware, having its principal office at 200 East Randolph Drive, Chicago, Illinois 60601 (hereinafter referred to as "Assignor") and SMG INDUSTRIES, INC., a corporation organized and existing under the laws of the State of California, having its principal office at \_\_\_\_\_ (hereinafter referred to as the "Assignee").

W I T N E S S E T H:

WHEREAS, Assignor and Assignee have entered into an Agreement for Sale and Purchase of Assets, dated \_\_\_\_\_, 1993, relating to the purchase by Assignee of certain assets of Assignor (the "Sale Agreement");

WHEREAS, pursuant to the Sale Agreement, those Contracts and Permits of Assignor described in Section 1.1(d) and (e) of the Sale Agreement are to be assigned to and assumed by Assignee;

WHEREAS, Assignor, to the extent it is legally and contractually able to do so, wishes to assign all of its rights and obligations as will arise under such Contracts and Permits to Assignee, and Assignee is willing to accept and assume from Assignor all such rights and obligations;

NOW, THEREFORE, for and in consideration of the mutual covenants, and subject to the terms and conditions contained herein, the parties hereto agree as follows:

1. Assigned Contracts

For purposes of this Agreement, the term "Assigned Contracts" shall mean all Contracts as described in Section 1.1(d) of the Sale Agreement.

2. Assigned Permits

For purposes of this Agreement, the term "Assigned Permits" shall

mean all Permits as described in Section 1.1(e) of the Sale Agreement.

3. Assignment and Assumption

(a) Subject to the terms, covenants, conditions, and provisions of the Assigned Contracts and Assigned Permits, and to the extent it is legally and contractually able to do so, Assignor hereby sells, transfers, sets over and assigns unto Assignee all of Assignor's rights, privileges, duties, and obligations under the Assigned Contracts and Assigned Permits.

(b) Assignee hereby accepts the assignment by Assignor set forth in (a) above and assumes all rights, duties, liabilities and obligations of Assignor under the Assigned Contracts and Assigned Permits pertaining to the period on and after the date hereof and agrees to perform and comply with all terms and conditions of the Assigned Contracts and Assigned Permits, including without limitation, payment of all amounts hereafter becoming due thereunder, and performance of all obligations hereafter to be performed thereunder, and Assignor shall have no further duty or obligation therein, except as provided in paragraph 4 hereof or in the Sale Agreement.

4. Subsequent Action

Subject to the provisions of Section 1.5 of the Sale Agreement, Assignor shall, from time to time at Assignee's request, use its reasonable efforts for a period of six (6) months from the date hereof to assist Assignee in securing the consent of any third parties which may be required to effect or perfect the assignment to Assignee of Assignor's rights in or under the Assigned Contracts and Assigned Permits; provided, however, that Assignor shall not be obligated to pay any consideration therefor to the party from whom the consent or waiver is requested.

5. Relationship With Sale Agreement

(a) The representations, warranties, covenants and limitations

contained in the Sale Agreement and affecting the Assigned Contracts and Assigned Permits shall apply with equal effect under this Agreement, it being understood that "Amoco" in the Sale Agreement is "Assignor" herein and "Buyer" in the Sale Agreement is "Assignee" herein; and

(b) Assignor ("Amoco" in the Sale Agreement) and Assignee ("Buyer" in the Sale Agreement) agree to allocate liabilities between themselves as set forth in Article V of the Sale Agreement and indemnify each other and hold each other harmless as set forth in Article X of the Sale Agreement for Claims (as defined in Article V of the Sale Agreement) asserted in connection with or arising out of the Assigned Contracts and Assigned Permits.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

AMOCO CHEMICAL COMPANY

By: \_\_\_\_\_

Title: \_\_\_\_\_

SMG INDUSTRIES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT D

April \_\_\_\_, 1993

President  
SMG Industries, Inc.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Sir:

In accordance with, and in consideration of your execution of, the Agreement for Sale and Purchase of Assets (the "Agreement") executed on \_\_\_\_\_ by and between Amoco Chemical Company, an affiliate of Amoco Oil Company, and SMG Industries, Inc. (Buyer), Amoco Oil Company (owner of the AMOCO name and logo) hereby extends its consent to Buyer for a period not to exceed ninety (90) days from the date of closing of the Agreement, for Buyer to use the AMOCO name and logo for the sole purpose of exhausting inventories purchased by Buyer under the Agreement which bear such name and/or logo.

Very truly yours,

Robert J. Rauscher  
Vice President Marketing

BPACC00167

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Exhibit E

LICENSE AGREEMENT  
UNDER PATENT RIGHTS AND TECHNICAL INFORMATION

IN CONNECTION WITH THE SALE OF  
AMOCO CHEMICAL COMPANY'S  
TORRANCE, CALIFORNIA POLYSTYRENE PLANT

BETWEEN

AMOCO CORPORATION  
(a Corporation of Indiana)

AND

COMPANY

(a Corporation of -----)

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## LICENSE AGREEMENT

This Agreement made effective \_\_\_\_\_, by and between Amoco Corporation (hereinafter "AMOCO"), a corporation of Indiana, having a principal place of business at Chicago, Illinois, and ----- (hereinafter "COMPANY"), a corporation of -----, having a principal place of business at -----.

WITNESSETH:

WHEREAS, AMOCO holds all right, title and interest in patents and technical information based on developments of its Affiliate, Amoco Chemical Company ("Amoco Chemical"), relating to polystyrene produced by bulk, batch-mode polymerization of styrene monomer as embodied in Amoco Chemical's Torrance, California Polystyrene Unit;

WHEREAS, Amoco Chemical has entered into an Agreement For Sale and Purchase of Assets relating to the Torrance, California Polystyrene Plant with COMPANY (the "Sale and Purchase Agreement").

WHEREAS, COMPANY will require a right and license from AMOCO under such patents and technical information to operate the Assets transferred to COMPANY pursuant to the Sale and Purchase Agreement;

WHEREAS, AMOCO is willing to grant such right and license subject to the terms and conditions contained herein;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, the parties hereto agree as follows:

## ARTICLE I--Definitions

For the purposes hereof, unless otherwise defined herein, terms defined in the Sale and Purchase Agreement shall have the same meanings herein, however, the following terms have the meanings set forth:

1.01 "Patent Rights" means United States and foreign Letters Patent, together with United States and foreign patent applications pending at the date of Closing, owned or controlled by AMOCO (in the sense of having an unrestricted right to grant licenses) necessary to manufacture, use and sell polystyrene produced by bulk, batch-mode polymerization of styrene monomer in Amoco Chemical's Torrance, California Polystyrene Plant (the "Plant") as of Closing. Known Patent Rights are listed in Attachment D-1 hereto, which is made a part hereof.

1.02 "Technical Information" means technical information reduced to writing and existing at the Plant as of Closing, including processes, formulations, techniques and drawings, owned or controlled by AMOCO (in the sense of having an unrestricted right to grant licenses) as provided to COMPANY under pursuant to the Sale and Purchase Agreement, which relates directly to manufacture of polystyrene by bulk, batch-mode polymerization of styrene monomer at the Plant.

1.03 "Licensed Polystyrene" means polystyrene manufactured by COMPANY using any of Patent Rights or Technical Information at the Real Property.

1.04 "Affiliate" means any company of which AMOCO now or hereafter owns or controls, directly or indirectly, fifty percent (50%) or more of the stock having the right to vote for directors thereof.

ARTICLE II--Grants

Subject to the terms and conditions set forth in this Agreement, AMOCO grants to COMPANY a paid-up, royalty-free, nonexclusive right and license under Patent Rights and Technical Information to manufacture Licensed Polystyrene at the Real Property, and to use and sell Licensed Polystyrene worldwide.

ARTICLE III--Confidentiality

3.01 COMPANY shall treat as confidential all Technical Information made available to it and shall not, without prior written consent of AMOCO, disclose to any third party any Technical Information; COMPANY shall limit access to Technical Information to those of its employees reasonably requiring the same for the purposes of this Agreement, and shall not use Technical Information for any purpose other than as expressly authorized by this Agreement. The obligations of this Paragraph 3.01 shall expire ten (10) years from the date of this License Agreement.

3.02 Nothing contained herein shall in any way restrict or impair COMPANY's right to use, disclose or otherwise deal with any information or data which (a) at the time of the disclosure is generally available to the public or thereafter becomes generally available to the public by publication or otherwise through no act of COMPANY; (b) COMPANY can show was in its possession prior to the time of the disclosure to it and was not acquired directly or indirectly from AMOCO or any AMOCO Affiliate; (c) is independently made available as a matter of lawful right to COMPANY by a third party; or (d) is developed by employees of COMPANY not having access to the Technical Information.

3.03 Anything to the contrary in this Article III notwithstanding, COMPANY may disclose Technical Information to third parties in the normal course of business, provided, that such disclosure is subject to a confidentiality obligation coextensive to Paragraph 3.01, hereof.

ARTICLE IV--Liabilities

4.01 AMOCO represents that it is the owner of Patent Rights and Technical Information and has the right to grant the rights and licenses described herein. AMOCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE SUBJECT MATTER OF THIS AGREEMENT.

4.02 AMOCO makes no warranty with respect to the validity of Patent Rights. COMPANY agrees that AMOCO shall not be liable for any loss or damage incurred by COMPANY or its customers as a result of any claim that COMPANY's or its customers' operations using Patent Rights or Technical Information infringes any patent or other property right of any third party.

4.03 AMOCO, its Affiliates, and their respective officers, agents, servants or employees, shall not be liable for any loss, damage, injury or other casualty of whatsoever kind, or by whomsoever caused (irrespective of negligence or fault, whether sole, concurrent, active, passive, comparative, strict, contractual or vicarious of AMOCO), to the person or property of anyone, including COMPANY or any of its customers, arising out of or resulting from COMPANY's or its customers' manufacture, use or sale of Licensed Polystyrene; COMPANY agrees for itself, its customers, its successors and assigns, to indemnify and hold harmless AMOCO, its Affiliates, and their respective officers, agents, servants and employees, from and against all claims, counterclaims, demands, liabilities, suits, actions, losses, costs and expenses (including all reasonable expenses and attorney's fees incurred by or imposed on AMOCO, its Affiliates, and their respective officers, agents, servants or employees, in connection therewith) for such loss, damage, injury or other casualty.

ARTICLE ARTICLE V--Termination

5.01 Unless previously terminated in accordance with Paragraphs 5.02 or 5.03 hereof, this Agreement shall continue in full force until the expiration of Patent Rights, or twenty (20) years from the date of this License Agreement, whichever is later.

5.02 COMPANY may terminate this Agreement with respect to Patent Rights upon sixty (60) days' prior written notice to AMOCO. After such termination, COMPANY shall have no rights under Patent Rights. Termination pursuant to this Paragraph 5.02 shall not relieve COMPANY of any other obligation or liability arising from any acts or omissions committed prior to the effective date of such termination.

5.03 If COMPANY is in default as to any obligation hereunder, and fails to remedy such default within sixty (60) days after receipt of written notice thereof from AMOCO specifying the nature of such default, AMOCO may terminate this Agreement by delivering written notice to COMPANY of termination; such termination shall not relieve COMPANY of any other obligation or liability arising from any acts or omissions committed prior to the effective date of such termination.



ARTICLE VI--Addresses

Unless otherwise specified in writing, the mailing addresses of the parties hereto are as follows:

AMOCO: Amoco Corporation  
Patents and Licensing Department  
Mail Code 1905  
Post Office Box 87703  
200 East Randolph Drive  
Chicago, Illinois 60680-0703  
Fax: (312) 856-4972

COMPANY: Company  
-----  
-----

Notices hereunder shall be deemed to have been duly given and served ten (10) days after the mailing thereof by Registered or Certified Mail, postpaid, to the party entitled thereto at its above address, or at such other address as it may from time to time designate in writing to the other party.

ARTICLE VII--Miscellaneous

7.01 The making, execution and delivery of this Agreement by COMPANY have been induced by no representations, statements, warranties or agreements by the parties hereof other than those expressed herein. This Agreement embodies the entire understanding of the parties and there are no further or other agreements or understandings, written or oral, in effect between the parties relating to the subject matter hereof.

7.02 Waiver of a breach of this Agreement or the failure of AMOCO to exercise any right under this Agreement shall in no event constitute a waiver as to any future breach, whether similar or dissimilar in nature, or as to the exercise of any future right under this Agreement.

7.03 This Agreement may be amended or modified only by an instrument of equal formality signed by the duly authorized representatives of the respective parties hereto.

7.04 COMPANY shall not, without the prior written consent of AMOCO, assign or transfer its rights or obligations hereunder to a third party, except to a successor to substantially the whole of its business and assets relating to the subject matter of this Agreement. Any assignment made contrary to this paragraph is null and void.

7.05 The titles of each Article in this Agreement are for the convenience of the parties and are not intended to modify the terms and conditions contained therein.

7.06 Nothing contained in this Agreement shall be construed to grant COMPANY any rights or licenses other than expressly stated herein.

7.07 This Agreement shall be construed and the legal relations between the parties determined in accordance with the laws of the State of Illinois, U.S.A., excluding any choice of law rules which may direct the application of the laws of any other jurisdiction.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed in their respective corporate names by their duly authorized representatives as of the date and year first written above.

AMOCO CORPORATION

By \_\_\_\_\_  
Joseph H. Ballway, Jr.  
General Manager  
Patents and Licensing Department

COMPANY

By \_\_\_\_\_

Title \_\_\_\_\_

Attachment E-1

Known Amoco Patent Rights

NONE

DRAFT

## Conditions of Sale

1. **Price** — The price(s) herein specified may be revised for any thirty (30) day period by written notice from Seller dispatched not less than fifteen (15) days prior to the date on which any such period commences. In the absence of such written notice from Seller to Buyer, the price then in effect shall continue in effect until such notice is given.
2. **Offer to Meet Lower Price** — If Buyer receives a bona fide offer, in writing, for Buyer to purchase material from a U.S. manufacturer of material other than Buyer or an affiliate of Buyer, at a volume at least equivalent to the minimum annual purchase requirement hereunder, for material of equal grade and quality as that to be supplied hereunder, to be effective for a period at least as long as the then remaining term hereunder at terms comparable to those contained herein, at a price lower than the price in effect hereunder, and if Buyer furnishes satisfactory written evidence of such lower price offer, Seller shall either meet such price on the same quantity of material offered or allow Buyer to purchase the material offered and deduct the quantity purchased from Buyer's minimum purchase, and Seller's maximum supply obligations set forth herein.
3. **Credit of Buyer** — If, in Seller's judgment, Buyer's credit shall become impaired at any time, Seller shall have the right to require that all deliveries except for cash until such time as Buyer's credit has been reestablished to Seller's satisfaction. Seller may at any time revise the stated credit terms whenever it deems such action advisable to protect its interest.
4. **Payment Terms** — Any delinquent or overdue invoices shall be subject to a finance charge of one and one half percent per month or the maximum rate allowed by law, whichever is less.
5. **Taxes** — Any tax or other Governmental charge upon the sale and/or shipment of the material(s) herein specified now in effect by Federal, State or Local authorities, or hereafter becoming effective within the life of this contract, shall be added to the invoice and shall be paid by Buyer.
6. **Delivery Terms** — The term "f.o.b. shipping point" means that after Seller tenders delivery of the material to a common carrier at Seller's shipping point, title to the material and risk of loss shall pass to Buyer.
7. **Risk of Loss** — As to material(s) to be delivered f.o.b. Seller's plant, title and risk of loss shall pass to the Buyer, and Buyer shall become the sole owner and take possession of such materials when they are loaded into cars or other conveyances at the plant of origin. Unless Seller specifically agrees otherwise, Buyer will pay the freight or other delivery charges, inspection fees, and all other charges levied or imposed on the material after the loading is completed. If the Seller prepays such charges on Buyer's request or for Buyer, Buyer will reimburse Seller.
8. **Weights** — Seller's or railroad weights (or Seller's measurements in case of material sold by volume) taken at shipping points, as stated in invoice, shall control unless proved to be in error.
9. **Warranties-Claims** — The Seller warrants that the goods furnished hereunder shall meet the specifications stated herein. NO OTHER WARRANTY WHETHER EXPRESS OR ARISING BY OPERATION OF LAW OR FROM ANY COURSE OF DEALING OR TRADE USAGE OR OTHERWISE IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL EXIST in connection with sale, resale or use of any of the Seller's products. Seller shall in no event be liable for loss of profits or for consequential damages resulting from the sale, resale, or use of any of Seller's products whether or not claimed to be due to the Seller's negligence. Buyer assumes all risk whatsoever as to the result of the use of the material(s) purchased, whether used singly or in combination with other substances. No claim of any kind, whether as to materials delivered or for non-delivery of material, shall be greater in amount than the purchase price of the material(s), in respect of which such damages are claimed, and failure to give notice of claim within sixty (60) days from the date of delivery or the date fixed for delivery, respectively, shall constitute a waiver by Buyer of all claims of any kind arising as a result of such delivery or non-delivery.
10. **Assignment** — This contract is not assignable by Buyer except with the written consent of Seller.
11. **Force Majeure** — In case performance of any terms or provisions hereof shall be delayed or prevented because of compliance with any law, decree, request or order of any governmental agency or authority, either local, state or federal, or because of riots, war, public disturbances, strikes, lockouts, differences with workmen, fires, floods, acts of God, accidents of navigation, breakdown or failure of transportation or transportation facilities, failure of or interference with the manufacture, receiving, handling, delivery, or consumption of the material covered hereby, inability to obtain raw materials, fuel, power, labor, containers or transportation facilities, or commercial impracticability, or for any other reason (whether or not of the same class or kind as herein set forth) which is not within the control of the party whose performance is interfered with and which by the exercise of reasonable diligence said party is unable to prevent, the party so suffering may at its option suspend deliveries or receipts during the period such cause continues, and no liability shall attach against either party on account thereof. In the event of a Force Majeure affecting Buyer, Buyer shall apportion its purchases among its contract suppliers of material, including its own departments and affiliates, on an equitable basis. In the event of a Force Majeure affecting Seller, Seller may apportion its available supply of such material among its contract purchasers including its own departments and divisions on an equitable basis without incurring liability for failure to perform this contract. The provision of this paragraph shall not be available to either party which fails to use reasonable diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch. The requirement that any Force Majeure be remedied with all reasonable dispatch shall not require the settlement of strikes or labor controversies by acceding to the demands of the opposing party or parties.
12. **Entire Contract** — This contract constitutes the full understanding of the parties, and a complete and an exclusive statement of the terms of their agreement. All representations, offers, and undertakings of the parties made prior to the effective date hereof, whether oral or in writing, are merged herein. No conditions, understandings, or agreements purporting to modify or vary the terms of this contract shall be binding unless hereafter made in writing and signed by an authorized representative of each party. No requirement stated herein that an item be in writing may be waived except by means of a written instrument issued by the party making the waiver. The acknowledgement or acceptance by a party of the purchase orders, shipping instructions, or sales acknowledgement forms containing terms or conditions at variance with or in addition to those set forth herein shall not in any event be deemed to modify or vary the terms of this contract.
13. **Authorized Signer** — This contract is binding upon Seller only when it is signed by an officer or authorized representative of Seller at its principal office at Chicago, Illinois.
14. **Savings Provisions** — If any provisions hereof is, or becomes, violative of any law, or rule, order or regulation issued thereunder, Seller shall have the right, upon notice to Buyer, to cancel such provision, without effect upon the other provisions, or to cancel further deliveries in their entirety.
15. **Compliance With Federal Laws** — Seller states that all goods delivered under this contract will have been produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Seller further states that the material sold hereunder is produced in accordance with applicable provisions of Executive Order 11248 dated September 24, 1965, which is incorporated herein by reference.
16. **Waiver** — Waiver by either party of any breach, or failure to enforce any of the terms and conditions of the contract at any time, shall not in any way affect, limit or waive the right of that party thereafter to enforce the contract and compel strict compliance with every term and condition thereof.
17. **Applicable State Law** — THE CONSTRUCTION OF THIS CONTRACT and the rights and obligations of the parties hereunder SHALL BE GOVERNED BY THE LAWS OF THE STATE OF California, excluding any choice of law rules which may direct the application of the laws of any other jurisdiction.
18. **Material Safety Data Sheet** — Seller has provided to Buyer and Buyer hereby acknowledges receipt of Seller's current Material Safety Data Sheet concerning material.

Exhibit F



Amoco Chemical Company

200 East Randolph Drive  
Chicago, Illinois 60601

Contract between Amoco Chemical Company herein called Seller and  
SMG Industries, Inc.

hereinafter called Buyer.

Seller agrees to sell and Buyer to buy the following material under the conditions herein specified

Period: From April 1, 1993 To December 31, 1994 and from  
calendar year to calendar year thereafter provided, however, that either party may terminate this agreement  
by giving the other party one-hundred eighty (180) days written notice prior to the end of 1994 or any  
Material: calendar year thereafter.

Styrene Monomer.

Quantity: Minimum Annual rate of twenty million pounds.  
Maximum 100% of Buyer's requirements.

Quality: As per specifications in Exhibit A, attached.

Price: Monthly price formula per Exhibit B, attached.

F.O.B.: Seller's shipping point.  
Seller will prepay and add to Buyer's account freight for shipment of Product to Buyer's facility at  
Torrance, CA. Seller will use its best efforts to obtain the lowest freight rates in shipping Product for  
Buyer's account.  
It is Seller's intention to continue to ship styrene for Buyer out of Refinery's Odessa, TX Plant, out from  
to time this option may not be available due to reasons beyond Seller's control.  
Terms: Net 30 days from invoice date.

Shipments: Tank Car.  
and  
Containers:

TER: Terminal Proposal-Seller will retain access to Torrance Plant for use as a terminal for supplying tank  
trucks of styrene monomer for quantities up to 500,000 pounds/month.  
Terms shall be per Exhibit C, attached.

Deliveries: Buyer will give Seller reasonable notice covering shipments. Seller is not required to deliver in any month more than  
monthly quantity specified or (if no monthly quantity is specified), more than the pro rata amount of the maximum  
quantity. In the event of failure of Buyer to take such quantities they may, at Seller's option, be cancelled in whole  
or in part. Seller is not required to deliver any quantities for which Buyer has not given shipping instructions.

Conditions: The conditions on the reverse side form a part of this contract unless changed in writing.

Signed	Seller Amoco Chemical Company		Buyer	
	By	Title	By	Title

AC 3382 (7-89)

BPACC00181

# EXHIBIT A

## STYRENE MONOMER SPECIFICATIONS

<u>PROPERTY</u>	<u>SPECIFICATION</u>	<u>TEST METHOD</u>
Purity, Wt. % min.	99.6	ASTM D-3799
Color, APHA Platinum-Cobalt	10 max.	ASTM D-1209
Polymer, ppm	10 max.	ASTM D-2121
Sulfur, ppm (as Sulfur)	25 max.	ASTM D-3961
Chlorides, ppm (as Chlorine)	50 max.	Amoco Method
Peroxides, ppm (as Hydrogen Peroxide)	100 max.	ASTM D-2340
Aldehydes, ppm (as Benzaldehyde)	200 max.	ASTM D-2119
Suspended Matter	Nil, bright and clear	Visual Inspection
Inhibitor, Tertiary Butyl Catechol, ppm	10 min. 15 max.	ASTM D-2120
Specific Gravity, 20/20°C	0.9070 min. 0.9080 max.	ASTM D-891
Benzene, ppm	1 max.	ASTM D-5135

Additional inhibitor is available upon request, at target level  $\pm$  5 ppm.

\*\* UPDATE 12-28-92

BPACC00182

## EXHIBIT B

### MONTHLY PRICE FORMULA

The monthly styrene price, in cents per pound, shall be determined as follows:

$$\text{Styrene Price} = 0.50 * (\text{Domestic Contract Price}) + 0.50 * (\text{Domestic Spot Price})$$

#### WHERE:

Domestic Contract Price = The predominant US domestic contract price, F.O.B. Gulf Coast, as agreed upon by Seller and Buyer, no later than five (5) working days after the start of each month unless mutually agreed by both parties that the price has not been determined. If agreement on the domestic contract price is not reached during this time period, the price shall be the net transaction price as published in the first issue of Monomer's Market Report published by CMAI after the start of the month less 1 cents per pound. In the event that a range of prices is published, the average of the range will be used. In the event said publication ceases to be published or the publisher significantly changes the basis on which such prices are computed, the parties agree to meet and, in good faith, negotiate a mutually agreed reference.

Domestic Spot Price = The predominant domestic spot price, F.O.B. Gulf Coast, as agreed upon by Seller and Buyer no later than five (5) working days after the start of each month.



EXHIBIT C

SERVICE AGREEMENT

THIS AGREEMENT, made and entered into as of \_\_\_\_\_, 1993 by and between AMOCO CHEMICAL COMPANY, a Delaware corporation with a place of business at 200 East Randolph Drive, Chicago, Illinois 60601 (hereinafter called "Amoco"), and SMG INDUSTRIES, INC., a California corporation with a place of business at \_\_\_\_\_ (hereinafter called "Buyer"):

WITNESSETH:

WHEREAS, Amoco contemplates the sale of Styrene meeting the specifications attached hereto (hereafter called "Styrene") and is desirous of having Buyer receive styrene and to store Styrene for Amoco; and

WHEREAS, Buyer is acquiring from Amoco and will operate certain bulk storage facilities in Torrance, California, which are suitable for the receipt of said Styrene and the storing and shipping of Styrene, and is willing to provide such facilities for Amoco's use;

NOW, THEREFORE, the parties hereto agree as follows:

(1) FACILITIES. Buyer agrees to provide the receiving, storing, and shipping facilities required to perform the operations contemplated hereunder. Said facilities are described in Schedule "A" annexed hereto and made a part hereof. Buyer shall furnish personnel for the operation of the said facilities.

(2) OPERATIONS. Amoco will deliver, or cause to be delivered, tank cars, or tank trucks of Styrene to Buyer's facilities for receiving, storing, and/or shipping by Buyer and Buyer will in compliance with applicable State, Federal and local laws, receive, store, and/or ship the Styrene in accordance with written orders and instructions given by Amoco to Buyer.

Buyer shall complete receiving and shipping documents as supplied by Amoco covering receipts and deliveries effected by Buyer at the direction of Amoco, and Buyer shall forward to Amoco, properly executed copies of the receiving and shipping documents.

(3) TERM OF AGREEMENT. This Agreement is effective \_\_\_\_\_, 1993 and shall continue for a period of two (2) years and from year to year thereafter, subject to either party's right to terminate at the end of any contract year upon having given three hundred sixty (360) days prior written notice.

(4) CHARGES. For all services performed by Buyer for Amoco hereunder, Amoco shall pay Buyer in accordance with the schedule of charges outlined in Schedule "B", Rates and Payments, attached hereto and made a part hereof.

(5) TITLE. Amoco will deliver Styrene to Buyer both (1) for sale to Buyer pursuant to the Styrene Sales Agreement of even date herewith, and (2) for storage by Buyer pursuant to this Agreement. With each delivery, Amoco shall designate what portion of the delivery is for sale to Buyer and what portion is for storage for Amoco. Title to Styrene sold to Buyer by Amoco shall be governed by the Styrene Sales Agreement. Title to Styrene delivered by Amoco to Buyer for storage shall remain in Amoco. Buyer may, however, commingle Amoco's Styrene with other styrene held by Buyer.

(6) INDEPENDENT CONTRACTOR. Buyer is an independent contractor, and Buyer shall use its own discretion and shall have complete and authoritative control over the work and its employees as to the schedules and other details of doing the work and shall assume all the rights, obligations and liabilities applicable to it as such independent contractor.

(7) PRODUCT LIABILITY. So long as Amoco's Styrene is in Buyer's hands or situated at Buyer's facilities, Buyer shall be responsible and liable for loss, contamination or damage to Amoco's Styrene.

(8) GENERAL LIABILITY. Each party shall be responsible for liabilities, losses, damages or claims for personal injury or damage to property arising in connection with Styrene to the extent attributable to the Styrene while it is in the possession of or under the control of said party, and said party shall indemnify and hold the other harmless against any such liabilities, losses, damages or claims.

(9) PRODUCT LOSSES. Buyer shall be entitled to a handling loss allowance of 1/2 of 1% of Styrene and inhibitors. Handling losses in excess of this amount as determined by an annual physical inventory conducted jointly by Amoco and Buyer or their designated representatives shall be reimbursed by Buyer to Amoco on the basis of Amoco's then current market price for Styrene or inhibitors F.O.B. Buyer's terminal. Overages and shortages shall be averaged against each other for each annual inventory period; all aggregate overages shall be credited to Amoco.

(10) INSURANCE COVERAGE. Buyer is to provide and shall carry the following insurance during the term of this Agreement:

- A. Statutory Workmen's Compensation in compliance with the Workmen's Compensation Laws of the State of California.

- B. Comprehensive General Liability Insurance including Contractual Liability Coverage with a minimum combined single limit of \$1,000,000 each occurrence for Bodily Injury or Property Damage.

(11) DEFAULT OF EITHER PARTY. If either party shall fail to perform any of its obligations hereunder, then, the other party may give written notice thereof to the party in default. If, within thirty (30) days after receipt of said notice, the party does not remove and remedy the default, and diligently prosecute such action so that the default is cured, then the party not in default may forthwith cancel this Agreement without any further obligation and shall have the right to collect any amounts due it hereunder.

(12) MEASUREMENT AND INSPECTION. The quantity of Styrene received or shipped by truck transports by Buyer shall be determined on the basis of weigh tickets on a Certified Scale designated by Buyer.

(13) INVENTORY. Buyer shall furnish Amoco with a monthly physical inventory covering the Styrene held in storage for Amoco by Buyer. The representatives of Amoco have the right at reasonable intervals to conduct inventories of Amoco's Styrene in the terminal.

(14) FORCE MAJEURE. Neither party shall be responsible for any delays, losses, damages or failure of performance of any of its obligations under this Agreement, where such delays, losses, damages or failures are due to Force Majeure (events beyond the reasonable control of the party affected). If any such delays, losses, damages or failures of performance should occur, then the obligations of the parties hereto shall be suspended for the period during which performance is prevented by such delay, loss, damage or failure of performance.

(15) MAINTENANCE AND TAXES. Buyer shall maintain all its facilities to be employed hereunder in a good and tenantable condition of maintenance and repair and in compliance with all applicable laws. Buyer shall be responsible for the payment of all property taxes with respect to such facilities. Amoco shall pay all taxes, assessments and fees (including any charges assessed in lieu thereof) that may be assessed against Amoco's Styrene at the terminal.

(16) AMENDMENTS. The entire agreement of the parties in respect hereof is contained herein. No alterations or modifications hereof shall be effective unless in writing, signed by the parties hereto.

(17) ASSIGNMENT. This Agreement shall be assignable to any successor corporation of Buyer owning the Torrance, California Facility or of Amoco.

(18) NOTICES. All notices required or permitted by this contract shall be deemed to have been properly given when delivered personally or sent by certified mail to the parties hereto at the respective address set forth herein or at such other address as may be furnished by either party to the other in writing.

WITNESS the due execution hereof the date first above written.

AMOCO CHEMICAL COMPANY

By \_\_\_\_\_

SMG INDUSTRIES, INC.

By \_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_

SCHEDULE "A"

FACILITIES

1. One (1) 31,000 gallon steel storage tank, unlined, with fire suppression system.
2. One (1) 49,000 gallon steel storage tank, unlined, with fire suppression system.
3. Three (3) tank car unloading stations with magnetic strainers.
4. One (1) transport loading station.
5. Pumps and loading lines capable of loading transports at 150 G.P.M..
6. All of the above are dedicated to the Torrance facility, but are not dedicated to Amoco's exclusive use.

SCHEDULE "B"

RATES

1. Charges: Charge covers receipt, storage, reloading onto outbound tanktrucks and testing. Amoco will pay to Buyer a handling fee of \$0.0025 (one-fourth of one cent) per pound of Styrene for all Styrene monomer that Amoco withdraws from Buyer's Styrene storage facility for resale to Amoco customers. As Amoco will also be delivering Styrene to this facility for consumption by Buyer, no fee will be payable upon Amoco's delivery to Buyer, only on Buyer's return delivery of Styrene to Amoco from storage.
2. Weighing Charges: Charge covers weighing trucks on a certified scale designated by Buyer.
3. Payment: Payment shall be made by Amoco to Buyer for the foregoing within thirty (30) days of receipt of monthly invoice.

EXHIBIT G

EMPLOYEE ASSIGNMENT AGREEMENT

THIS AGREEMENT is made this \_\_\_\_ day of \_\_\_\_, 1993, by and between Amoco Chemical Company (hereinafter called "Amoco"), a corporation organized and existing under the laws of the State of Delaware, and SMG Industries, Inc. (hereinafter called "Buyer"), a corporation organized and existing under the laws of the State of California.

W I T N E S S E T H:

WHEREAS, Amoco and Buyer have entered into an Agreement for Sale and Purchase of Assets (the "Sale Agreement") dated as of the \_\_\_\_ day of \_\_\_\_, 1993, providing for the transfer by Amoco and the acquisition by Buyer of certain assets of Amoco; and

WHEREAS, pursuant to Section 3.4 of the Sale Agreement, Buyer and Amoco are to enter into an agreement, in the form annexed to the Sale Agreement as Exhibit "G", covering the assignment by Amoco to Buyer, for a period not to exceed fourteen (14) calendar days, of a certain person whose services are requested by Buyer to assist in the transition to Buyer's operation of the Assets (as such term is defined in the Sale Agreement) acquired by Buyer under the Sale Agreement; and

WHEREAS, this Agreement is the agreement to be entered into by Buyer and Amoco pursuant to Section 3.4 of the Sale Agreement; and

WHEREAS, the person whose services are requested by Buyer is an employee of Amoco working, prior to Closing, at the Real Property (as such term is defined in the Sale Agreement), and but for this Agreement such person would be reassigned by Amoco as of Closing to another location;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements herein contained, Amoco and Buyer hereby agree as follows:

ARTICLE 1 - CONDITIONS OF ASSIGNMENT

1.01      Assignment. Amoco will assign exclusively to Buyer Jeffrey J. Campbell ("Employee"), subject, however, to the limitations herein set forth.

1.02      Continued Employment Conditions. Buyer agrees that the Employee shall continue at all times to be an employee of Amoco or its affiliates and shall remain subject to and benefit from the terms of his employment with Amoco. In addition, such Employee shall continue to be eligible for participation in all Amoco benefit plans and shall continue to receive his salary and/or other compensation from Amoco. Employee shall be ineligible for participation in any employee benefit programs of Buyer.

1.03      Facilities. Buyer will provide the Employee with all secretarial and clerical services, office space and equipment and other facilities required by such individual for such period of time as such individual is assigned to Buyer.

1.04      Length of Assignment. The Employee's assignment hereunder shall commence as of the Closing Date and shall continue for a maximum period of fourteen (14) calendar days.



Provided, however, the assignment hereunder of Employee may be terminated by Buyer on two (2) days' written notice for just cause, or on five (5) days' written notice upon any good faith determination of lack of need or unsuitability for the assignment.

#### ARTICLE II - COMPENSATION AND PAYMENT

2.01 Expense Accounts. Buyer shall reimburse the Employee directly for any business expenses (including, by way of example and not by way of limitation, travel and related costs) and other business outlays undertaken by such individual in the course of his or her assignment to Buyer, all in accordance with the practices and procedures followed by Buyer with respect to its own employees.

2.02 Responsibility. The work to be performed by Employee during the period of his assignment shall be under the sole direction and control of Buyer.

#### ARTICLE III - REPRESENTATIONS, WARRANTIES AND INDEMNITIES

3.01 Representations and Warranties of Buyer. Buyer hereby represents and warrants to Amoco that the facilities and conditions of employment provided by Buyer to the Employee will comply in all material respects with the applicable requirements of the Occupational Health and Safety Act, as amended, and Buyer will provide Amoco with all information necessary to maintain compliance in all respects with the Fair Labor Standards Act, as amended, as well as all applicable regulations and orders issued pursuant thereto.

Buyer represents and warrants that the duties and services, positions, privileges and obligations of Employee, as well as the facilities and services provided to them pursuant to Section 1.04 above, will be commensurate with those to which they would

otherwise be entitled from, and with which they would otherwise be provided by, Amoco.

3.02        Disclaimer of Amoco. There are no express warranties by Amoco hereunder, and no warranties shall be implied under this Agreement or at law or in equity, with respect to the subject matter hereof. By way of example and not by way of limitation, Amoco does not warrant the quality or competence of Employee or that the assignment of such Employee will permit Buyer to achieve any specific or general results, nor shall Amoco have any liability whatsoever for the acts, omissions and/or other performance of such Employee, including without limitation any negligence, ordinary or gross, or intentional wrongs of such Employee, while such Employee is assigned to Buyer. Buyer agrees that it has requested the services of Employee, that it has not relied in any way on Amoco in requesting such services, and provided Amoco complies with Sections 1.01, 1.04 and 4.02, it expressly releases Amoco from any liability under this Agreement, whether for negligence or otherwise. In no event shall Amoco be liable for special, indirect, incidental, consequential or punitive damages, whether or not resulting from Amoco's or the Employee's negligence.

3.03        Indemnity by Buyer. Buyer shall defend, indemnify and hold Amoco harmless from and against all claims, losses and liabilities (including costs and expenses incidental thereto) which may be asserted against or incurred by Amoco in connection with acts, omissions and/or other performance of Employee while assigned to Buyer. For purposes of this Section 3.03, the term "Amoco" shall be deemed to include Amoco, its subsidiaries and affiliated companies, its officers, directors, employees and agents and the officers, directors, employees and agents of its subsidiaries and affiliated companies.

3.04 Survival of Indemnity. The indemnity obligation set forth in this Article III shall survive termination or expiration of this Agreement.

#### ARTICLE IV - TERM AND TERMINATION

4.01 Term. The term of this Agreement shall commence on the Closing Date described in the Sale Agreement and shall expire coterminous with the termination of the assignment of Employee, unless sooner terminated in accordance with Section 4.02 below.

4.02 Termination. Either party may terminate this Agreement by written notice to the other party hereto, and without liability to said other party, in the event that said other party:

(a) fails to perform, keep or fulfill any of the other covenants, undertakings, obligations or conditions of this Agreement, the Sale Agreement or any of the ancillary agreements or instruments referred to in Articles III, IV and VIII of the Sale Agreement, and fails to remedy such default within five (5) days after written notice of same; or

(b) is guilty of a breach of warranty or material misrepresentation hereunder.

4.03 Settlement of Accounts. Within ten (10) days after the expiration or termination of this Agreement for any cause whatsoever, all accounts due and owing as between the parties shall become due and payable.

#### ARTICLE V - MISCELLANEOUS

5.01 Force Majeure. Neither party shall be liable to the other party hereto for its failure or delay in performing its obligations hereunder (other than its obligations to pay money) due to any contingency beyond such party's reasonable control, including, without limitation, acts of God, fires, floods, wars, acts of war, sabotage, terrorism accidents, labor disputes or shortages, governmental laws, ordinances, rules or regulations (whether valid or invalid), inability to obtain power, material, equipment or transportation and any other similar contingency.

5.02 Relationship of the Parties. Nothing in this Agreement shall create or be deemed to create a partnership, joint venture, agency, landlord-tenant or any other relationship between the parties except as may be expressly set forth in this Agreement.

5.03 Notices. (a) Notices under this Agreement shall be given in writing and delivered:

If to Amoco to: Amoco Chemical Company  
Attn.: Vice President and General  
Manager, Olefins and  
Polymers  
200 East Randolph Drive  
Chicago, Illinois 60601

If to Buyer to: SMG Industries, Inc.  
Attn: President  
3061 Maria Street  
Rancho Dominguez, California

or to such other address or individual as may be designated by such party.

(b) Notices shall be deemed to have been given:

(1) On the next succeeding business day if the notice has been delivered by hand or sent by facsimile; or

(2) On the next succeeding business day following receipt of a notice sent by registered or certified U.S. mail, return receipt requested, as evidenced by the return receipt card properly endorsed by the receiving party.

5.05 Assignments. Neither party may assign or otherwise transfer its rights or delegate or otherwise transfer its obligations hereunder without the prior written consent of the other party hereto.

5.06 Entire Agreement; Waiver; Amendments. This Agreement, together with the Sale Agreement and all Exhibits and Schedules thereto, constitutes the entire agreement of the parties with respect to the subject matter hereof, supersedes all prior writings and understandings with respect thereto, and may not be modified or amended except by a writing duly executed by authorized representatives of the respective parties. No change in, modification of, addition to or waiver of any of the terms and conditions of this Agreement shall be effected by the acknowledgment or acceptance of requests containing additional or different terms and conditions. No waiver of any of the provisions hereof shall be effective unless in writing and signed by the party against whom asserted and no waiver made shall bind either party to a waiver of any succeeding breach of the same or any other provisions hereof.

5.07 Governing Law. This Agreement and the rights and obligations of the parties hereunder shall be governed by and construed in accordance with the laws of the State of California, excluding any choice of law rules which may direct the application of the laws of any other jurisdiction.

5.08 Headings and Captions. The headings and captions to the Articles and Sections of this Agreement have been inserted for

convenience of reference only and shall not affect or be deemed to affect the construction of this Agreement.

IN WITNESS WHEREOF, Amoco and Buyer have caused this Agreement to be duly executed by officers thereunto duly authorized, all as of the day and year first above written.

AMOCO CHEMICAL COMPANY

By: \_\_\_\_\_

Title: \_\_\_\_\_

SMG INDUSTRIES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT G

EXHIBIT H  
TECHNICAL SERVICES AGREEMENT

This Agreement is made this \_\_\_\_\_ day of \_\_\_\_\_, 1993, by and between Amoco Chemical Company, a corporation organized and existing under the laws of Delaware (hereinafter called "Amoco"), and -----, a corporation organized and existing under the laws of ----- (hereinafter called "Buyer").

WITNESSETH:

WHEREAS, Amoco and Buyer have entered into an Agreement for Sale and Purchase of Assets, dated \_\_\_\_\_, 1993, relating to the purchase by Buyer of certain assets of Amoco (the "Sale Agreement");

WHEREAS, Pursuant to Section 3.5 of the Sale Agreement, Amoco agreed to provide certain technical services to Buyer for a limited time after Closing; and

WHEREAS, Amoco is willing to provide such services subject to the terms and conditions contained herein;

NOW, THEREFORE, in consideration of the premises and mutual covenants and agreements contained herein, and in consideration of the undertakings of Amoco in the Sale Agreement the parties hereto agree as follows:

1. In accordance with the terms and conditions contained in this Technical Services Agreement, Amoco will provide to Buyer routine analytical services listed in Attachment H-1 for three (3) months following Closing.

2. For the purposes of this Technical Services Agreement, the term Samples means portions of polystyrene produced at the Real Property, which are suitable for testing for composition and physical properties.

3. Amoco will accept Samples from Buyer up to three (3) months after Closing. Such Samples must be delivered to Amoco's analytical services laboratory located at 150 West Warrenville Road, Naperville, Illinois 60563-8460, shipping prepaid, in accordance with all applicable governmental transportation regulations. All Samples must be contained in

glass bottles and sealed with a lid in a secure manner. All Samples must be identified as "Torrance Polystyrene Test Samples" and directed to the attention of \_\_\_\_\_. In respect of each Sample sent to Amoco hereunder, Buyer must state which analytical service or services listed in Attachment H-1 Amoco is to perform, and Buyer must supply a sufficient amount of Sample to perform each such service requested as identified in Attachment H-1.

4. Amoco will conduct such routine analyses in accordance with Amoco's established laboratory techniques and will report results from such analyses in a timely manner to Buyer in accordance with Amoco's established procedures for routine service.

5. Within ten (10) days after receipt of such results, Buyer will pay Amoco in accordance with the schedule of charges listed in Attachment H-1. Overdue payments will be charged a fee of 1<sup>1</sup>/<sub>2</sub>% per month.

6. Analytical services provided hereunder may be performed by Amoco or an affiliate of Amoco.

7. AMOCO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, REGARDING THE SUBJECT MATTER OF THIS AGREEMENT. All analytical services provided to Buyer by Amoco hereunder are without warranty of any kind including, without limitation, any warranty regarding the accuracy of results or other data provided to Buyer. As to any service provided hereunder, Amoco's entire liability is limited strictly to the amount paid by Buyer for that service.

8. For the purposes of this Technical Services Agreement, the term "Amoco Group" means one or more of the following: Amoco, its affiliates, and the directors, officers, agents, employees, and servants of Amoco or its affiliates and the term "Claim" means any loss, damage, claim, injury or other casualty of whatsoever kind or by whomsoever caused (irrespective of negligence or fault, whether sole, concurrent, active, passive, comparative strict, contractual or vicarious).



9. The Amoco Group shall not be liable for any Claim arising out of or resulting from the use or application by Buyer of the services provided hereunder; and Buyer agrees for itself, its successors and assigns, to indemnify, defend, and hold the Amoco Group harmless from and against any and all Claims asserted against, incurred or required to be paid by the Amoco Group arising out of or resulting from the use or application by Buyer of the services provided hereunder, or the use or sale of products from the Plant, except for Claims arising solely from the willful misconduct of the Amoco Group, and the Amoco Group shall in no event be liable for any damages consequential to such Claims.

10. The making, execution and delivery of this Technical Services Agreement by Buyer have been induced by no representations, statements, warranties or agreements by the parties hereof other than those expressed herein. This Technical Services Agreement together with the Sale Agreement embody the entire understanding of the parties, and there are no further or other agreements or understandings, written or oral, in effect between the parties, relating to the subject matter hereof.

11. Waiver of a breach of this Technical Services Agreement or the failure of Amoco to exercise any right under this Agreement shall in no event constitute a waiver as to any future breach, whether similar or dissimilar in nature, or as to the exercise of any future right under this Technical Services Agreement.

12. This Technical Services Agreement may be amended or modified only by an instrument of equal formality signed by the duly authorized representatives of the respective parties hereto.

13. This Technical Services Agreement shall be construed and the legal relations between the parties determined in accordance with the laws of the State of Illinois, U.S.A., excluding any choice of law rules which may direct the application of the laws of any other jurisdiction.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed in their respective corporate names by their duly authorized representatives as of the date and year first written above.

AMOCO CHEMICAL COMPANY

By \_\_\_\_\_

BUYER

By \_\_\_\_\_

Title \_\_\_\_\_

Attachment H-1

Routine Analytical Services and Charges

<u>Services</u>	<u>Test Method</u>	<u>Required Sample Size</u>	<u>Charge</u>
Tensile Properties	ASTM D638	3 lbs*	\$500
Flexural Properties	ASTM D790	3 lbs*	\$500
Heat Deflection	ASTM D648	3 lbs*	\$500
Vicat	ASTM D1525	3 lbs*	\$500
Molecular Weight (GPC)	SRE 4-3	10 grams	\$500
Residual Monomer	AC-256	10 grams	\$125
Dimers, Trimers	AC-325	10 grams	\$300
Mineral Oil	AC-817	10 grams	\$300
Zn Stearate Content	AC-08190	10 grams	\$125
External Wax Content	AC-9930	50 grams	\$500
Density	ASTM D792	10 grams	\$125
Hardness	ASTM D785	3 lbs	\$500
Rheology	SRE 3-3	100 grams	\$500

\*If all four test services are to be made, a total five-pound sample is required.

EXHIBIT I  
SECURITY AGREEMENT

This Security Agreement ("Agreement") is made this \_\_\_\_\_ day of \_\_\_\_\_, 1993, by and between Amoco Chemical Company, a corporation organized and existing under the laws of Delaware (hereinafter called "Amoco"), and SMG Industries, Inc., a corporation organized and existing under the laws of California (hereinafter called "Buyer").

W I T N E S S E T H:

WHEREAS, Amoco and Buyer have entered into an Agreement for Sale and Purchase of Assets, dated \_\_\_\_\_, 1993, relating to the purchase by Buyer of certain assets of Amoco (the "Sale Agreement");

WHEREAS, under the Sale Agreement, Amoco's interest in the Working Capital will be transferred to Buyer as of Closing (as such terms are defined in the Sale Agreement), but if there is a positive Working Capital, pursuant to Section 4.3 of the Sale Agreement, Buyer will have to pay Amoco after Closing an amount for such Working Capital;

WHEREAS, pursuant to the same Section 4.3 of the Sale Agreement, Buyer is to execute and deliver to Amoco at least five (5) business days prior to Closing an agreement pursuant

five (5) business days prior to Closing an agreement pursuant to which Buyer shall grant to Amoco a security interest in the Inventories (as such term is defined in the Sale Agreement), and in all other raw materials, work in process, finished goods, packaging supplies, materials and supplies, and accounts receivable, in which Buyer acquires any interest, whether before or after Closing, in order to secure any payment required by Buyer under Section 4.3(b) of the Sale Agreement for the Working Capital;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements herein contained, and in consideration of the undertakings of Amoco in the Sale Agreement, the parties hereto agree as follows:

1. Simultaneous with transfer to Buyer of Amoco's interest in the Inventories under the Sale Agreement, Buyer does hereby grant to Amoco a security interest in and to all of the Inventories under Article 9 of the Uniform Commercial Code. Buyer also does hereby grant to Amoco a security interest under such Article 9 in and to any and all other raw materials, work in process, finished goods, packaging supplies, materials and supplies, and accounts receivable, in which Buyer now has any interest or in which Buyer hereafter acquires any interest, whether before or after Closing, related to Buyer's business operations at the Real Property

(as such term is defined in the Sale Agreement). The security interests granted hereunder (hereinafter referred to as the "Security Interest") shall also attach to all proceeds and products of the property described above and to all additions and accessions thereto and substitutions thereof. All such property described above, along with all proceeds and products thereof, and all additions and accessions thereto and substitutions thereof, is hereinafter called the "Collateral".

2. This Agreement is given, and the Security Interest is hereby granted:

A. To secure any payment for the Working Capital which may be required by Buyer under Section 4.3 of the Sale Agreement, and all costs, expenses, advances and liabilities which may be incurred by Amoco in the collection of such payment or in the protection, maintenance or liquidation of the Security Interest, including interest at the maximum rate allowed by law;

B. To secure the payment and the full, complete and faithful performance of each and every obligation, covenant, promise and agreement herein contained; and

C. To secure the payment of any and all loss or damage which Amoco may sustain by reason of any defaults on the part of Buyer under this Agreement.

3. Buyer does hereby agree as follows:

A. To prepare and deliver to Amoco, upon notice given by Amoco from time to time, a full inventory listing, as

of the date such notice is given, of all items then constituting Collateral and such other information as Amoco may request with respect to purchases or sales or other acquisitions or dispositions of Collateral. Each such inventory shall be certified as being true and complete by a duly authorized officer of Buyer;

B. To properly care for and keep the Collateral in good condition and repair and not to commit any waste or permit any deterioration thereof. Amoco may examine and inspect the Collateral, wherever located, at any reasonable time or times;

C. To provide and maintain in force, at all times, fire and other types of insurance as may be required by Amoco, each in an amount satisfactory to and with loss payable to Amoco, and at Amoco's request to deliver the policy or policies to Amoco together with written evidence showing payment of the premium therefor. The policies for such insurance shall be for a term and in form and content and issued by such companies as may be satisfactory to Amoco, and at Amoco's request shall remain in possession of Amoco as further security. The amount collected under any fire or other insurance policy may be applied by Amoco upon any indebtedness secured hereby and in such order as Amoco may determine, or, at the option of Amoco, any part or all of such amount may, without reducing the indebtedness secured hereby, either be used to replace or restore the Collateral covered by

this Agreement to a condition satisfactory to Amoco, or be released to Buyer. Such application or release shall not cure or waive any default hereunder;

D. To appear in and defend any action or proceeding, affecting or purporting to affect the security of this Agreement or the Collateral, and pay all costs and expenses thereof and all costs and expenses in any such action or proceeding in which Amoco may appear;

E. To pay before delinquent all taxes and assessments affecting the Collateral and all costs or penalties thereon;

F. Not to permit the creation of any security interest, lien, encumbrance, charge or levy on or against the Collateral, in whole or in part, without first obtaining the written consent of Amoco; and

G. Buyer at least five (5) business days before Closing under the Sale Agreement shall execute and deliver to Amoco such financing statements or other instruments as Amoco requests to evidence, perfect and continue the Security Interest granted hereunder.

4. Buyer represents and warrants to Amoco the following:

A. Except for sales from inventory in the ordinary course of Buyer's business, the Collateral has not been and will not be sold, encumbered, hypothecated or otherwise transferred, in whole or in part, and no person or entity



holds any interest, claim or demand, in law, equity or otherwise, that is prior or superior to the Security Interest or that in any manner may interfere with the exercise of the rights and remedies of Amoco hereunder; and

B. Buyer has full right, power and authority to enter into and perform its obligations under this Agreement and to grant the Security Interest. Neither the execution and performance of this Agreement nor the grant of the Security Interest will constitute a default under any other agreement or commitment to which Buyer is a party or by which Buyer is bound.

5. Amoco may, but need not, perform any act required of Buyer and may, but need not, pay, purchase, contest or compromise any claim, debt, lien, charge or encumbrance which in the judgment of Amoco may affect or appear to affect the security of this Agreement and may, but need not, discharge taxes, liens, security interests or other encumbrances at any time levied or placed on the Collateral and make any payment for insurance on the Collateral and for maintenance or preservation of the Collateral; all sums so expended shall be immediately paid by Buyer upon demand by Amoco with interest from date of demand at the maximum rate allowed by law.

6. Should Buyer fail or refuse to make any payment or do any act which it is obligated to make or do at any time and in any manner herein provided or provided in the Sale Agreement, or should Buyer default in the true and faithful

performance of any covenant or condition hereof or thereof, or in the event any warranty, representation or statement made or furnished to Amoco by or on behalf of Buyer herein or therein shall be false in any material respect when made or furnished, then Amoco, at its sole discretion, may declare all sums secured hereby immediately due without demand upon or notice to Buyer, and may:

A. Take immediate possession of the Collateral, and Buyer agrees upon demand to surrender possession thereof to Amoco peaceably and that Amoco may employ any and all means reasonably necessary within its sole discretion to gain possession of the Collateral, and Amoco, its successors and assigns, agents, servants, attorneys and employees are hereby released from any causes or causes of action, claims, demands, obligations or liabilities whatsoever claimed to exist by reason of taking possession and/or removal of the Collateral; and

B. Sell and dispose of all or any portion of the Collateral as a unit or in parcels, at public or private sale, with or without having the Collateral at the place of sale, or, without removal of the Collateral, upon the premises of Buyer, and upon the terms and in such manner as Amoco may determine. Upon the sale of the Collateral, Amoco may apply, in any order that it deems appropriate, the proceeds of such sale to the unpaid indebtedness, accrued but unpaid interest and other charges secured hereby, as well as all other

obligations of every class and character owed by Buyer to Amoco and secured by virtue of the provisions hereof, together with all costs incurred by Amoco and all charges of making such sale, including, among others, all expenses of repossession, storage, preparation for sale, advertising, sale of the Collateral and reasonable attorneys' fees and expenses; Amoco or its agents, successors or assigns may purchase all or any part of the Collateral at any such sale; and any and all unexpired insurance shall inure to the benefit of and pass to the purchaser of the Collateral at any sale held hereunder.

7. In addition to any rights or remedies provided herein, Amoco may have and exercise all other rights and remedies as provided for by law, including those provided by Article 9 of the Uniform Commercial Code, and shall have the right to enforce one or more remedies hereunder successively or concurrently and any such action shall not estop or prevent Amoco from pursuing any further remedy which it may have hereunder or by law.

8. Provided that Buyer is not in default hereunder, Buyer may from time to time sell or otherwise dispose of, free of the lien of this Security Agreement, any part of the inventories included in the Collateral in the ordinary course of business without the prior written consent of Amoco. Provided that Buyer is not in default hereunder, Buyer may also from time to time collect, for the benefit of Amoco, sums due on accounts receivable included in the Collateral.

9. No default shall be waived by Amoco except in writing and no waiver of any default shall operate as a waiver of any other default or the same default on a future occasion.

10. Buyer agrees that Amoco shall not be liable to Buyer or to any other person or persons for injury or damage that may result to any person or property by reason of the use or condition of the Collateral or any part thereof, and Buyer further agrees to defend, indemnify and keep Amoco free and harmless from and against any and all costs, damages, losses, expenses, claims or liability arising out of or connected with, directly or indirectly, the use, management or condition of the Collateral.

11. Buyer shall not conduct business under any other name than that given above, nor shall it change or reorganize the type of business entity under which it does business without first obtaining Amoco's prior written consent, which consent shall not be unreasonably withheld. Buyer agrees that, in the event of any such change of name or business, it shall execute, deliver and file all documents, instruments and agreements required by Amoco to preserve and protect the Security Interest and Amoco's other rights hereunder.

12. With reference to any of the parties to this Agreement, the use of the singular number shall include the plural, the use of the plural shall include the singular number, the use of the masculine gender shall include the feminine gender, and the use of the feminine gender shall

include the masculine gender and shall be so construed as applicable to and including a corporation, partnership or other entity that may be a party or parties hereto.

13. This Agreement and the terms, conditions, covenants and agreements hereof are intended to and shall inure to the benefit of and extend to and include the successors and assigns of Amoco and shall be binding upon the successors and assigns of Buyer.

14. The person who shall execute this Security Agreement on behalf of Buyer does hereby represent and warrant to Amoco that he was and is authorized, directed and empowered to execute this Agreement for and on behalf of and in the name of Buyer.

15. The security interest granted under this Agreement shall terminate only upon payment in full of all amounts due to Amoco or upon the mutual written agreement of the parties hereto, whichever earlier occurs.

16. Wherever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

17. This Agreement constitutes the full understanding of the parties and a complete and exclusive statement of the terms of their agreement with respect to the subject matter hereof. No amendment, modification, or waiver of any provision of this Agreement, and no understanding, course of dealing, or usage of trade purporting to modify, explain or supplement the terms of this Agreement, shall be effective unless in writing signed by both parties, and specifically stating that it is an amendment, modification or waiver of this Agreement. No requirement stated herein that an item be in writing may be waived except by means of a written instrument issued by the party making the waiver. No modification shall be effected by the acknowledgement or acceptance of purchase orders, shipping instructions, or other forms containing terms or conditions at variance with or in addition to those set forth herein. Any waiver by either party of any provision or condition of this Agreement or any right or remedy shall not be construed or deemed to be a waiver of any other provision or condition of this Agreement, nor a waiver of a subsequent breach of the same provision of condition, nor a waiver of any other right or remedy.

18. This Agreement shall be governed by the laws of the State of California, excluding any choice of law rules which may direct application of the laws of any other jurisdiction.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

AMOCO CHEMICAL COMPANY

By: \_\_\_\_\_

Title: \_\_\_\_\_

SMG INDUSTRIES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT J

GUARANTY

This Guaranty is made this \_\_\_\_\_ day of \_\_\_\_\_, 1993, by SMP Inc., a corporation organized and existing under the laws of the Philippines (hereinafter called "Guarantor"), for the benefit of Amoco Chemical Company, a corporation organized and existing under the laws of Delaware (hereinafter called "Amoco").

W I T N E S S E T H:

WHEREAS, Amoco and SMG Industries, Inc. ("Buyer") have entered into an Agreement for Sale and Purchase of Assets, dated \_\_\_\_\_, 1993, relating to the purchase by Buyer of certain assets of Amoco (the "Sale Agreement");

WHEREAS, Amoco was willing to enter into the Sale Agreement with Buyer only on the condition that the performance of Buyer's obligations under the Sale Agreement was guaranteed by Guarantor;

WHEREAS, execution and delivery of this Guaranty by Guarantor is a condition precedent to Amoco closing the transactions under the Sale Agreement;



WHEREAS, Guarantor, because of its relationship to Buyer, desired Amoco to enter into the Sale Agreement with Buyer and desires Amoco to close the transactions under the Sale Agreement;

NOW, THEREFORE, in consideration of Amoco entering into the Sale Agreement, and in order to induce Amoco to close the transactions under the Sale Agreement, the Guarantor hereby represents and warrants to, and agrees with, Amoco as follows:

1. Guarantor absolutely, unconditionally and irrevocably guarantees to Amoco the due and punctual performance of each and every responsibility and obligation of Buyer under the Sale Agreement (including the responsibilities and obligations of Buyer under the agreements under Article III and Sections 1.5 and 4.3(d) of the Sale Agreement, and exhibits and schedules to the Sale Agreement, all collectively referred to herein as the "Ancillary Obligations"); provided, however, that Guarantor's aforementioned guaranty obligation, with respect to Buyer's obligations under Section 5.5(e) of the Sale Agreement, (i) shall only apply to the extent that a release, discharge, disposal or emission of, or exposure to, hazardous waste, hazardous substances, pollutants, contaminants, materials, products or by-products, is caused by Buyer or occurs in connection with Buyer's operations or

business, and (ii) shall be limited to a maximum amount of one million dollars (\$1,000,000.00).

2. This Guaranty shall be a continuing guaranty and shall remain in full force and effect for as long as Buyer has obligations and responsibilities under the Sale Agreement (including the Ancillary Obligations), except with respect to Buyer's obligations under Section 5.5(e) of the Sale Agreement, this Guaranty shall remain in force and effect only for five (5) years after the Closing Date (as such term is defined in the Sale Agreement). No delay in exercising or failure to exercise any right hereunder on the part of Amoco shall operate as a waiver of such right, nor shall any single or partial exercise of any right by Amoco preclude any other or further exercise of rights. Guarantor's obligations under this Guaranty shall not be diminished, limited, reduced or affected by any failure of Amoco to exercise or delay in exercising any rights Amoco may have under the Sale Agreement against Buyer, and shall not be conditioned upon or require a prior exercise by Amoco of rights against the Buyer. Guarantor waives notice of acceptance.

3. Amoco may claim under this Guaranty by notice in

writing, sent by mail delivery service or facsimile, to the following address:

Chemtex Print U.S.A., Inc.

Attn: President

3061 Maria Street

Rancho Dominguez, CA 90221

Facsimile No.: (310) 631-1673

Upon written notice pursuant to the foregoing by Amoco of any default by Buyer in the performance of any responsibility or obligation under the Sale Agreement (including the Ancillary Obligations), regardless of the reason for the default, the Guarantor shall immediately cure such default and perform the obligation or responsibility in question.

4. The Guarantor represents and warrants that the execution, delivery and performance of this Guaranty by it has been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the charter or by-laws of the Guarantor, any provision of any indenture, agreement or other instrument to which the Guarantor is a party, or by which it or any of its properties or assets are bound, or be in conflict with, result in a breach of or constitute (after due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the

creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of its properties or assets.

5. The Guarantor represents and warrants that it is a corporation duly organized, validly existing and is in good standing under the laws of the jurisdiction of its incorporation.

6. The Guarantor represents and warrants that this Guaranty is a valid and binding obligation of the Guarantor, enforceable in accordance with its terms subject, as to the enforcement of remedies, to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to the enforcement of creditors' rights generally.

7. The Guarantor represents and warrants that its obligations under this Guaranty will, upon demand for performance by Amoco pursuant to paragraph 3 hereof, constitute direct, unconditional and general obligations of the Guarantor and rank in right of payment (without taking into account any security or collateral for other indebtedness) equal or prior to all indebtedness and liabilities for borrowed money, or other obligations arising out of the extension of credit, of the Guarantor.

8. The Guarantor represents and warrants that no authorization, order, approval or consent or other action of any governmental authority is legally required for the execution and delivery of this Guaranty or for the carrying out of the provisions hereof.

9. The Guarantor represents and warrants that there are no actions, suits or proceedings pending or threatened against or affecting the Guarantor or any of its property at law or in equity or before any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign (other than actions, suits or proceedings that, in the opinion of counsel to the Guarantor, are without merit) which involve or affect this Guaranty, or which, if adversely determined, would materially impair the ability of the Guarantor to perform its obligations under the Guaranty.

10. The Guarantor represents and warrants that it has heretofore furnished a consolidated statement of income and a consolidated statement of changes in financial condition for the twelve-month period ended December 31, 1992 and a consolidated balance sheet as at the end of such year, all the foregoing reported upon by the independent public accountants of the Guarantor.

11. The Guarantor represents and warrants that the financial statements referred to in paragraph 10 were prepared in accordance with generally accepted accounting principles and present fairly the financial condition and results of operations of the Guarantor as of the date and for the period indicated.

12. The Guarantor represents and warrants that it has filed or caused to be filed all Federal, state and local tax returns which, to the knowledge of the Guarantor, are required to be filed and has paid or caused to be paid all material taxes as shown on such returns or on any assessment received by it or by any of them to the extent that such taxes have become due, except taxes the validity of which is being contested in good faith by appropriate proceedings and with respect to which the Guarantor shall have set aside on its books adequate reserves.

13. This Guaranty shall be deemed to have been made and given in Los Angeles, California, U.S.A., and shall be governed by the laws of the State of California, U.S.A., excluding any choice of law rules which may direct the application of the laws of any other jurisdiction. The Guarantor agrees that Amoco may enforce this Guaranty in, and that any and all disputes arising out of or in connection with this Guaranty shall be submitted to, either the state courts

or the federal courts located in the State of California, U.S.A. The Guarantor hereby irrevocably submits to the nonexclusive jurisdiction of such courts in respect of this Guaranty and in connection with any suit, action or proceeding filed or brought by Amoco arising out of or in connection with this Guaranty. For such purpose the Guarantor hereby irrevocably designates Chemtex Print U.S.A., Inc., with offices on the date hereof at 3061 Maria Street, Rancho Dominguez, California 90221, or failing it, Jonathan G. Gabriel, with offices on the date hereof at 21900 Burbank Boulevard, Suite 200, Woodland Hills, California 91367-6407, or failing him, CT Corporation System, with offices on the date hereof at 818 West Seventh Street, Los Angeles, California 90017, as its nonexclusive agent to accept and receive for and on behalf of it service of any process which may be served in any suit, action or proceeding filed or brought by Amoco in either the state or federal courts in California and agrees that the failure of the process agent to give any notice of any such service or process to it shall not impair or affect the validity of such service or of any judgment based thereon. The Guarantor hereby irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of venue of any such suit, action or proceeding brought in any such court and any claim that any such suit, action or proceeding filed or brought in such a court has been brought in an inconvenient

herein contained shall preclude Amoco from bringing a suit, action or proceeding in respect hereof in any other country or place where the Guarantor may be found or located.

14. This Guaranty may not be changed, waived, discharged or terminated orally, but only by an instrument in writing signed by both parties.

15. In case any one or more of the provisions in this Guaranty should be or become invalid, illegal or unenforceable in any respect, such provision or provisions shall be ineffective to the extent of such invalidity, illegality or unenforceability only, and the validity, legality and enforceability of the remainder of such provision or provisions and of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

16. This Guaranty shall be binding upon the undersigned, and upon the heirs, legal representatives, successors and assigns of the undersigned, and shall inure to the benefit of Amoco, its successors, legal representatives and assigns.



IN WITNESS WHEREOF, Guarantor has caused this Guaranty to be  
executed by its duly authorized representative as of the day  
and year first above written.

SMP INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT K

GUARANTY

This Guaranty is made this \_\_\_\_\_ day of \_\_\_\_\_, 1993, by Chemtex Print U.S.A., Inc., a corporation organized and existing under the laws of California (hereinafter called "Guarantor"), for the benefit of Amoco Chemical Company, a corporation organized and existing under the laws of Delaware (hereinafter called "Amoco").

W I T N E S S E T H:

WHEREAS, Amoco and SMG Industries, Inc. ("Buyer") have entered into an Agreement for Sale and Purchase of Assets, dated \_\_\_\_\_, 1993, relating to the purchase by Buyer of certain assets of Amoco (the "Sale Agreement");

WHEREAS, Amoco was willing to enter into the Sale Agreement with Buyer only on the condition that the performance of Buyer's obligations under Section 4.3 of the Sale Agreement was guaranteed by Guarantor;

WHEREAS, execution and delivery of this Guaranty by Guarantor is a condition precedent to Amoco closing the transactions under the Sale Agreement;

WHEREAS, Guarantor, because of its relationship to Buyer, desired Amoco to enter into the Sale Agreement with Buyer and desires Amoco to close the transactions under the Sale Agreement;

NOW, THEREFORE, in consideration of Amoco entering into the Sale Agreement, and in order to induce Amoco to close the transactions under the Sale Agreement, the Guarantor hereby represents and warrants to, and agrees with, Amoco as follows:

1. Guarantor absolutely, unconditionally and irrevocably guarantees to Amoco the due and punctual performance of each and every responsibility and obligation of Buyer under Section 4.3 of the Sale Agreement (including the responsibilities and obligations of Buyer under the agreement referred to in Section 4.3(d) of the Sale Agreement).

2. This Guaranty shall be a continuing guaranty and shall remain in full force and effect for as long as Buyer has obligations and responsibilities under Section 4.3 of the Sale Agreement (including responsibilities and obligations of Buyer under the agreement referred to in Section 4.3(d) of the Sale Agreement). No delay in exercising or failure to exercise any right hereunder on the part of Amoco shall operate as a waiver of such right, nor shall any single or partial exercise of any right by Amoco preclude any other or further exercise of

rights. Guarantor's obligations under this Guaranty shall not be diminished, limited, reduced or affected by any failure of Amoco to exercise or delay in exercising any rights Amoco may have under the Sale Agreement against Buyer, and shall not be conditioned upon or require a prior exercise by Amoco of rights against the Buyer. Guarantor waives notice of acceptance.

3. Amoco may claim under this Guaranty by notice in writing, sent by mail delivery service or facsimile, to the following address:

Chemtex Print U.S.A., Inc.

Attn: President

3061 Maria Street

Rancho Dominguez, CA 90221

Facsimile No.: (310) 631-1673

Upon written notice pursuant to the foregoing by Amoco of any default by Buyer in the performance of any responsibility or obligation under Section 4.3 of the Sale Agreement (including the responsibilities and obligations under the agreement referred to in Section 4.3(d) of the Sale Agreement), regardless of the reason for the default, the Guarantor shall immediately cure such default and perform the obligation or responsibility in question.

4. The Guarantor represents and warrants that the execution, delivery and performance of this Guaranty by it has been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the charter or by-laws of the Guarantor, any provision of any indenture, agreement or other instrument to which the Guarantor is a party, or by which it or any of its properties or assets are bound, or be in conflict with, result in a breach of or constitute (after due notice or lapse of time or both) a default under any such indenture, agreement or other instrument, or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of its properties or assets.

5. The Guarantor represents and warrants that it is a corporation duly organized, validly existing and is in good standing under the laws of the jurisdiction of its incorporation.

6. The Guarantor represents and warrants that this Guaranty is a valid and binding obligation of the Guarantor, enforceable in accordance with its terms subject, as to the enforcement of remedies, to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to the enforcement of creditors' rights generally.

7. The Guarantor represents and warrants that its obligations under this Guaranty will, upon demand for performance by Amoco pursuant to paragraph 3 hereof, constitute direct, unconditional and general obligations of the Guarantor and rank in right of payment (without taking into account any security or collateral for other indebtedness) equal or prior to all indebtedness and liabilities for borrowed money, or other obligations arising out of the extension of credit, of the Guarantor.

8. The Guarantor represents and warrants that no authorization, order, approval or consent or other action of any governmental authority is legally required for the execution and delivery of this Guaranty or for the carrying out of the provisions hereof.

9. The Guarantor represents and warrants that there are no actions, suits or proceedings pending or threatened against or affecting the Guarantor or any of its property at law or in equity or before any Federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign (other than actions, suits or proceedings that, in the opinion of counsel to the Guarantor, are without merit) which involve or affect this Guaranty, or which, if adversely determined, would materially

impair the ability of the Guarantor to perform its obligations under the Guaranty.

10. The Guarantor represents and warrants that it has heretofore furnished a consolidated statement of income and a consolidated statement of changes in financial condition for the twelve-month period ended December 31, 1992 and a consolidated balance sheet as at the end of such year, all the foregoing reported upon by the independent public accountants of the Guarantor.

11. The Guarantor represents and warrants that the financial statements referred to in paragraph 10 were prepared in accordance with generally accepted accounting principles and present fairly the financial condition and results of operations of the Guarantor as of the date and for the period indicated.

12. The Guarantor represents and warrants that it has filed or caused to be filed all Federal, state and local tax returns which, to the knowledge of the Guarantor, are required to be filed and has paid or caused to be paid all material taxes as shown on such returns or on any assessment received by it or by any of them to the extent that such taxes have become due, except taxes the validity of which is being contested in good faith by appropriate proceedings and with

respect to which the Guarantor shall have set aside on its books adequate reserves.

13. This Guaranty shall be governed by the laws of the State of California, excluding any choice of law rules which may direct the application of the laws of any other jurisdiction.

14. This Guaranty may not be changed, waived, discharged or terminated orally, but only by an instrument in writing signed by both parties.

15. In case any one or more of the provisions in this Guaranty should be or become invalid, illegal or unenforceable in any respect, such provision or provisions shall be ineffective to the extent of such invalidity, illegality or unenforceability only, and the validity, legality and enforceability of the remainder of such provision or provisions and of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

16. This Guaranty shall be binding upon the undersigned, and upon the heirs, legal representatives, successors and assigns of the undersigned, and shall inure to the benefit of Amoco, its successors, legal representatives and assigns.



IN WITNESS WHEREOF, Guarantor has caused this Guaranty to be executed by its duly authorized representative as of the day and year first above written.

CHEMTEX PRINT U.S.A., INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EXHIBIT L  
OPINION OF COUNSEL

Amoco Chemical Company  
200 East Randolph Drive  
Chicago, Illinois

Guaranty ("Guaranty") of SMP Inc. ("Guarantor")  
to Amoco Chemical Company pursuant to Section 8.1(f) of the  
Agreement for Sale and Purchase of Assets  
("Agreement") by and between Amoco Chemical Company  
and SMG Industries, Inc.

Gentlemen:

I am counsel for Guarantor and am familiar with the business and legal affairs of Guarantor. This opinion is furnished to you pursuant to Section 8.1(f) of the above Agreement. I have reviewed the Agreement and the Guaranty, together with the corporate minute book, certificate of incorporation, by-laws, certificate of public officials and such other corporate and other documents of Guarantor, and reviewed such questions of law, as I have deemed appropriate for rendering this opinion.

I am of the opinion that:

1. Guarantor is a corporation duly organized, validly existing and in good standing under the laws of the Philippines.
2. Guarantor has the corporate power and authority to enter into and perform the Guaranty. The execution, delivery and performance of the Guaranty has been duly and validly authorized by all necessary corporate action on the part of the Guarantor.
3. The Guaranty constitutes a legal, valid, and binding obligation of Guarantor, enforceable against Guarantor in accordance with its terms, except as such enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by equitable principles (whether or not any action to enforce the Guaranty is brought at law or in equity).

Very truly yours,

EXHIBIT L

BPACC00232

6.17

EXHIBIT M

I, E. C. MARSHALL, HEREBY CERTIFY that I am Secretary of Amoco Chemical Company, a Delaware corporation, that as such officer I have custody of the corporate seal and corporate records of said corporation; that the following is a true and correct copy of a resolution duly adopted by the Board of Directors of said corporation on \_\_\_\_\_, 1993, and that, as of the date hereof, said resolution is in full force and effect and has not been amended or rescinded.

RESOLVED: That the Company should enter into an agreement with SMG Industries, Inc. (hereinafter "SMG") pursuant to which SMG would purchase the Company's Torrance, California plant for the manufacture and sale of polystyrene and certain related assets, including certain land, buildings and improvements, machinery, equipment and inventory, related contract rights, and would assume certain obligations related to such assets, of such business, all in accordance with the terms and conditions set forth in the Agreement for Sale and Purchase of Assets by and between SMG and the Company (hereinafter referred to as the "Agreement"); and further

RESOLVED: That any officer of this Company, or R. M. Lerner, acting individually should be and they are hereby authorized to execute and deliver the aforementioned Agreement in the name and on behalf of the Company, in substantially the form submitted to this Board of Directors and filed with the records of the Company, with such changes therein and additions thereto as shall be approved by the person executing and delivering same, such approval to be conclusively evidenced by said execution and delivery; and further

RESOLVED: That the Company should consummate the transaction described in the Agreement, and to that end, the proper officers, employees and representatives of the Company, and R. M. Lerner, acting individually should be and they are hereby authorized to execute, transfer, and deliver all documents, convey property, grant easements, receive funds, and take any and all actions in the name and on the behalf of the Company which they individually deem necessary or desirable in connection with the aforesaid purchase of assets, including but not limited to all actions required or permitted pursuant to the Agreement, and to execute, transfer, and deliver such instruments, certificates, documents, agreements and papers on behalf of the Company which are referred to in the Agreement, including the Schedules and Exhibits thereto, or which they deem appropriate to carry out the intent of the foregoing resolutions, or to further any of the matters or transactions referred to or in contemplated by the documents approved or authorized by the foregoing resolutions.

I FURTHER CERTIFY that each of the below-named persons has been duly elected, has duly qualified, and on the date hereof is an officer of Amoco Chemical Company, holding the office below set opposite his or her name.

Vice President	T. W. Longmire
Vice President	S. K. Welch
Secretary	E. C. Marshall
Assistant Secretary	K. A. Zigterman

IN WITNESS WHEREOF, I have executed these presents as of the \_\_\_\_\_ day of \_\_\_\_\_, 1993.

\_\_\_\_\_  
Secretary

EXHIBIT O  
OPINION OF COUNSEL

Amoco Chemical Company  
200 East Randolph Drive  
Chicago, Illinois

Agreement for Sale and Purchase of Assets  
("Agreement") by and between Amoco Chemical Company  
("Seller") and SMG Industries, Inc. ("Buyer")

Gentlemen:

I am counsel for Buyer and am familiar with the business and legal affairs of Buyer. I have represented Buyer in connection with the above Agreement and the transactions contemplated thereby. This opinion is furnished to you pursuant to Section 14.18 of the Agreement. I have reviewed the Agreement, the various exhibits and schedules thereto, and all of the agreements and documents being executed and delivered by Buyer in connection with the Agreement (collectively, the "Transaction Documents"), together with the corporate minute book, certificate of incorporation, by-laws, certificate of public officials and such other corporate and other documents of Buyer, and reviewed such questions of law, as I have deemed appropriate for rendering this opinion.

I am of the opinion that:

1. Buyer is a corporation duly organized, validly existing and in good standing, and has paid all required franchise taxes, under the laws of the State of California.
2. Buyer has the corporate power and authority to enter into and perform the Agreement and Transaction Documents. The execution, delivery and performance of the Agreement and the Transaction Documents have been duly and validly authorized by all necessary corporate action on the part of the Buyer.
3. Each of the Agreement and the Transaction Documents constitutes a legal, valid, and binding obligation of Buyer, enforceable against Buyer in accordance with their respective terms, except as such enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by equitable principles (whether or not any action to enforce any such document is brought at law or in equity).

Very truly yours,

EXHIBIT.O

BPACC00235

K-X

COPIES OF OUR "CORPORATION  
BRANT DEED"

BRAND PLASTICS CO.

BPACC00236

Street  
Address  
City &  
State

510 South Spring Street  
Los Angeles 13, California  
Attn: Keith A. Puursel

RAY E. LEE, County Recorder

FEE  
\$2.80  
2T

SPACE ABOVE THIS LINE FOR RECORDER'S USE



AFFIX I.R.S. \$ 29.70 IN THIS SPACE



# Corporation Grant Deed

TO 406 C (398A) fm

THIS FORM FURNISHED BY TITLE INSURANCE AND TRUST COMPANY

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

AMERICAN CHEMSOLV, INC.,

a corporation organized under the laws of the state of California,  
hereby GRANTS to BRAND PLASTICS CO., a Delaware corporation,

the following described real property in the  
county of Los Angeles, state of California: (per rider hereto attached)

## DESCRIPTION

### PARCEL 1:

The Easterly 258 feet of the westerly 467 feet of the South 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

PARCEL 2: The Northerly 12-1/2 feet of the Easterly 258 feet of the Westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 herein-after described.

PARCEL 3: A non-exclusive easement for ingress and egress for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

PARCEL 4: An easement for location and placement of underground utilities and/or sewer lines and for the purpose of laying, maintaining, operating and removing at any time a line or lines of pipe, together with the right of ingress and egress to excavate land for, construct, maintain, attend and/or remove said pipe line or lines with respect to the northerly 5 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

BPACC00237

1002

1) All taxes for the fiscal year 1962-1963, a lien not yet payable.

3) An agreement dated April 17, 1962 by and between K. G. Optical, Inc., American Chemsolv, Inc., Horace L. White and Donna G. White, recorded concurrently herewith.

Dated: April 23, 1962

COUNTY OF LOS ANGELES

..... Secretary of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

(Seal)

Signature

HORACE W. LITTLE, JR

MY COMMISSION EXPIRES FEB. 18, 1964  
Notary Public in and for said County and State

By [Signature] President

By Robert J. [Signature] Secretary

Title Order No. \_\_\_\_\_

Escrow or Loan No. 56 86 660-DER:fm



Dick:

Assuming my letter and the attached two copies of the contract are O K would you please mail them out at once. Ask your secy to notify mine, Miss Haring, Ext 331, of such release so my gal can get the ~~pp~~ copies of the letter sent out at the Prudential.

Here are some of the key questions I have; but first the general problem ~~1.1.1.1~~ that motivates them:

Problem: Brand had contract with Shell at  $\frac{1}{2}$ ¢/lb. under market. We agreed to meet when we notified Brand of our intent to begin supply under our S&L agreement. Brand got off hook with Shell OK. However, before 1/1/63 at which time we were to start supply, Brand said Carbide had offered 0.66¢ under market. Brand said offer was for about one third their requirements at leaset, but that Brand felt Carbide would supply all if asked to. Brand said that we would have to take their word, because they couldn't get Carbide to write out an under market bid, especially if not yet accepted. When we by other avenues became convinced that offer was bona fide..we agreed to meet Our alternative would have ~~pp~~ been to allow Carbide to deliver for a while ( Brand felt for three months to avoid bad face for them in industry) to establish bona fide nature...this would have cost ~~us~~ \$30,000 lost profits. Such loss plus other-~~av~~guine convincing of bona fide nature of bid..caused us to meet. The problem is: If we have to meet only on Brands "word"; if Brand continues to invite low bids (as we ultimately found out they did with Carbide) with implications of partial requirements business...how can we avoid a continual whipsaw.. Admitteely in time our competitors will realize their locked out conditions/....but meanwhile we'll lose money.

One Approach I would like to take is as follows:

1. Intrepret paragraph 10 of our L&S agreement with Brand to mean "total" requirements of all raw materials.....etc."

2. Intrepret <sup>u</sup> obligations to meet as one only if a ~~pp~~ lower bid is madeto supply total requirements, not just part. Hence the deletion of the clause in item 2 on reverse of contract which implies we would meet bids of partial.

3. Be hardnosel aboutfurnishing of "satisfactory evidence of such lower price etc". Do not take word, but require copy of an offermade in writing. Do not accept gambit of "let competitor supply a few tank cars to eastablish new price"

One final separate but related problem: When confronted by a customer whose word you believe that he has a bona fide lower bid; and when such customer refuses to furnish any evidence other than his word; and when meeting price causes not hardships....what is best for Amoco ....a letter from me to our files detailing conditions of and reasons for meeting the lower price?

And God bless everyone, said Tiny Tim!!

Thanks,

GR

BPACC00239

Loan & Supply Agreement with Brand made the first of November, 1960, contains the following provision:

10. Until December 31, 1975, Amoco shall have the right to supply Brand's requirements of all raw materials at prices no higher than those at which Brand could obtain materials of like quality and quantity from third parties.

*This does not  
go*



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

20575 CENTER RIDGE ROAD

CLEVELAND 16, OHIO

TELEPHONE EDISON 3-0600

*File  
Brand  
Plast*

SYNTHETIC RUBBER DIVISION

November 27, 1961

Mr. R. L. Curtis  
Brand Plastics Company  
2400 Willow Springs Road  
Willow Springs, Illinois

Dear Mr. Curtis:

It is with pleasure that we attach the original, executed copy covering your requirements of styrene monomer for the period January 1, 1962, to December 31, 1964.

Your past business is much appreciated, and it is our hope that the fine relationship between our two firms will continue for many years to come.

Yours very truly,

*D. P. O'Connell*

D. P. O'Connell

BPACC00241



## SHELL CHEMICAL COMPANY

Synthetic Rubber Division

P. O. Box 218

Torrance, California

## CONTRACT

SHELL CHEMICAL COMPANY, hereinafter called "Seller," agrees to sell to  
BRAND PLASTICS COMPANY, a corporation,  
4400 Willow Springs Road, Willow Springs, Illinois

hereinafter called "Buyer," and Buyer agrees to purchase from Seller merchandise herein described and according to the terms and conditions named below:

PERIOD: January 1, 1962 to December 31, 1964.

PRODUCT: Styrene Monomer (Specifications attached hereto)

QUANTITY: Buyer's requirements, for use by Buyer in the manufacture of polystyrene, estimated at 20 million pounds for 1962 but not to exceed 30 million pounds per year except at Seller's option.

PRICE: 11.2 cents per pound escalated as per Rider I attached hereto.

DELIVERY: F.O.B. BUYER'S WORKS IN Willow Springs, Illinois in Seller's tank cars or in tank trucks.

TERMS: NET 10th OF FOLLOWING MONTH

REMARKS: Buyer agrees to pay Shell's posted list price for Styrene Monomer as long as the prevailing carload price for General Purpose Crystal Grade of Polystyrene (as determined by the average of the prices posted by Dow and Monsanto) is 4¢ per pound above Shell's posted list price for Monomer in tank cars. Seller agrees to reduce the price of Styrene Monomer when necessary to maintain this 4¢ per pound margin provided that the tank car price to Buyer for Styrene Monomer hereunder shall never be less than 10¢ per pound, f.o.b. Buyer's works, Willow Springs, Illinois.

The Conditions of Sale set forth on the reverse side hereof form a part of this contract together with Rider I and Styrene Monomer specifications form a part of this contract.

"SHELL CHEMICAL COMPANY" is a Division of, and means herein, SHELL OIL COMPANY, a Delaware corporation.

ACCEPTED:

DATED: November 15, 1961

BRAND PLASTICS COMPANY  
(NAME OF CONTRACTEE)

SHELL CHEMICAL COMPANY

By: *[Signature]*

By: *[Signature]*

Sales Manager

Title: *Sec'y - Treas.*

Title: Synthetic Rubber Division

EBLEB  
11/9/61

RPACC00242

## CONDITIONS OF SALE

1. Quantity and/or weights of bulk tank car and tank truck shipments shall be based either on outage tables and appropriate temperature corrections or weighmaster's certificate. Deliveries shall be made via railway or automotive truck as Seller shall elect. The term "f.o.b. Buyer's works" when used in this contract means deliveries f.o.b. railway cars at carrier's nearest delivery point or at railway siding designated by Buyer, when via rail, and f.o.b. Buyer's plant, when via automotive truck.
2. Buyer shall give Seller reasonable notice covering shipments, and Seller shall not be required to tender delivery of any quantities for which Buyer has not given shipping instructions. Seller shall not be required to deliver in any month more than the specified monthly quantity or, if no monthly quantity is specified, more than the pro rata amount of the specified maximum quantity. Any portion of the maximum monthly quantity which Buyer fails to take in any month may, at Seller's option, be cancelled.
3. Buyer agrees to furnish and maintain safe and adequate facilities in all respects meeting all requirements of any applicable governmental law, rule or regulation, for receiving deliveries of and storing any products delivered hereunder in bulk by automotive trucks, and Buyer hereby releases Seller from any liability for, and agrees to indemnify Seller on account of, any claim for injury to or death of persons or damage to property in anywise resulting from or based upon Buyer's failure to comply with the foregoing provision.
4. Buyer shall pay Seller in United States par funds, without discount, for all goods delivered. Seller reserves the right, among other remedies, to suspend further deliveries in the event Buyer fails to pay for any one shipment when payment for same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
5. The price hereof specified may be revised for any quarterly period commencing on the first days of January, April, July and October after the date hereof (including the first such quarterly period) by written notice from Seller dispatched not less than 15 days prior to the date on which any such quarterly period is to commence. Buyer's failure to serve Seller with written notice of objection to proposed price revision prior to the beginning of any quarterly period shall be considered acceptance of such revision. In the absence of such written notice from the Seller to the Buyer regarding any contemplated adjustment of prices for the ensuing quarter, it is understood that the price then in effect shall continue in effect for the next quarter. Failure of Buyer and Seller to agree on proposed price revision after such notice by Seller releases Seller without obligation and permits Buyer to purchase elsewhere quantities required during the quarterly period in question.
6. If Buyer is offered material of equal quality at a price lower than stated herein and furnishes evidence of such lower price, the Seller will either meet such price or allow Buyer to purchase said material so offered, the amount so purchased to be deducted from the quantity specified herein.
7. Any excise tax imposed, and payable by Seller, on or measured by the manufacture, transportation or sale of the goods purchased by Buyer hereunder shall be paid by Buyer to Seller in addition to price specified herein.
8. Seller gives no guarantee of the suitability of the goods for any specific purpose, even if that purpose is known to him. Seller shall not be liable for any loss or damage resulting from the handling or use of the goods shipped hereunder whether in manufacturing processes or otherwise.
9. Unless otherwise stated, the goods purchased by Buyer hereunder are sold by Seller for Buyer's own consumption in the United States, and Seller may limit deliveries accordingly.
10. Either party hereto shall be absolved from its obligations under this contract when and to the extent that performance thereof is delayed or prevented by any cause, except financial, reasonably beyond such party's control, or by fire, explosion, breakdown of machinery or equipment, plant shut-down, riots, strikes, labor disputes, compliance with requirement of governmental authority, total or partial failure of the usual means of transportation of the products to be sold hereunder, or inability for any reason to obtain materials used in the manufacture of such products.
11. If any provision hereof is, or becomes, violative of any law, or rule, order or regulation issued thereunder, Seller shall have the right, upon notice to Buyer, to cancel such provision, without effect upon the other provisions, or to cancel further deliveries in their entirety.
12. Buyer's right to purchase any goods hereunder is not transferable nor assignable by Buyer without Seller's consent.
13. In the event of any breach by Buyer of any of the provisions of this contract, Seller shall have the right, in addition to any other rights or remedies it may have, to suspend deliveries hereunder or to terminate this contract.
14. This contract contains the entire understanding between Buyer and Seller for the purchase and sale of the material described herein and the same shall not be modified by acceptance by Seller of any purchase order issued by Buyer and containing terms or conditions inconsistent herewith. Neither this contract nor any subsequent agreement amending or supplementing this contract shall be binding on Seller unless and until it has been signed in Seller's behalf by a duly authorized representative; and commencement of performance hereunder or under any such subsequent agreement shall not constitute a waiver of this requirement.

RIDER I

STYRENE CONTRACT DATED NOVEMBER 15, 1961

BETWEEN

SHELL CHEMICAL COMPANY (SELLER)

A DIVISION OF SHELL OIL COMPANY

AND

BRAND PLASTICS COMPANY (BUYER)

On or before the 20th day of each December, March, June and September during the term hereof, Seller shall compute to the nearest one-hundredth of one cent and shall notify Buyer in writing of the price applicable for styrene for the next calendar quarter in accordance with the following formula:

- A. The base price shall be increased or decreased by a percentage thereof equal to thirty-five one-hundredths of the percentage change in Average Hourly Earnings for the Petroleum Refining Industry for production workers or nonsupervisory employees as shown in "Employment and Earnings", published by the Bureau of Labor Statistics, U. S. Department of Labor, from the average hourly earnings of \$3.02 per hour (the average of the hourly earnings published for the months of July, August and September, 1960). The average of the hourly earnings published for each month of the second preceding calendar quarter shall be used to compute the price for the next calendar quarter.
- B. If the per gallon tank car price of benzene (petroleum nitration grade) published for Port Arthur, Texas production in the "Oil, Paint and Drug Reporter" exceeds 34.0 cents per gallon f.o.b. Buyer's works, or is below 31.0 cents per gallon f.o.b. Buyer's works, the base price shall be increased by a percentage thereof equal to twenty-five one-hundredths of the percentage increase from 34.0 cents per gallon or shall be decreased by a percentage thereof equal to twenty-five one-hundredths of the percentage decrease from 31.0 cents per gallon. The price published in the last issue for the months of November, February, May and August shall be used to compute the price for the first succeeding calendar quarter beginning January 1, April 1, July 1 and October 1 respectively.

$$35 \left[ \frac{x - 3.02}{3.02} \right]$$

$$25 \left[ \frac{x - 31.0}{31.0} \right]$$

Should any of the indices or price series be discontinued or the base for the index or series be revised, then the Buyer and the Seller shall agree on a substitute basis for the escalation of the base price.



# Technical Bulletin

SYNTHETIC RUBBER  
DIVISION

FA 1-2340 • DA 3-3030

SHELL CHEMICAL COMPANY  
NEW YORK 100 • LONDON, ENGLAND

SC.61-90

## STYRENE SALES SPECIFICATIONS

### RUBBER GRADE

PURITY (by freezing point)	
% minimum by weight .....	99.20
ALDEHYDES (as benzaldehyde)	
% maximum by weight .....	0.03
PEROXIDE (as $H_2O_2$ )	
% maximum by weight .....	0.01
SULFUR (as S)	
% maximum by weight .....	0.005
CHLORIDES (as Cl)	
% maximum by weight .....	0.015
POLYMER CONTENT	
% maximum by weight .....	0.005
SOLUBILITY OF POLYMER	
in benzene .....	Complete
INHIBITOR (Para-tertiary-butyl catechol)	
Minimum-ppm .....	10
Maximum-ppm .....	15
COLOR	
Maximum — APHA .....	20

BPACC00245



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

20575 CENTER RIDGE ROAD  
CLEVELAND 16, OHIO

TELEPHONE EDISON 3-0400

SYNTHETIC RUBBER DIVISION

November 27, 1961

Mr. R. L. Curtis  
Brand Plastics Company  
8400 Willow Springs Road  
Willow Springs, Illinois

Dear Mr. Curtis:

It is with pleasure that we attach the original, executed copy covering your requirements of styrene monomer for the period January 1, 1962, to December 31, 1964.

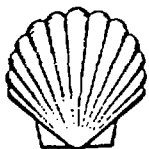
Your past business is much appreciated, and it is our hope that the fine relationship between our two firms will continue for many years to come.

Yours very truly,

D. P. O'Connell

BPACC00246





# SHELL CHEMICAL COMPANY

Synthetic Rubber Division

P. O. Box 216

Torrance, California

## CONTRACT

SHELL CHEMICAL COMPANY, hereinafter called "Seller," agrees to sell to BRAND PLASTICS COMPANY, a corporation, 8400 Willow Springs Road, Willow Springs, Illinois

hereinafter called "Buyer," and Buyer agrees to purchase from Seller merchandise herein described and according to the terms and conditions named below:

PERIOD: January 1, 1962 to December 31, 1964.

PRODUCT: Styrene Monomer (Specifications attached hereto)

QUANTITY: Buyer's requirements, for use by Buyer in the manufacture of polystyrene, estimated at 20 million pounds for 1962 but not to exceed 30 million pounds per year except at Seller's option.

PRICE: 11.2 cents per pound escalated as per Rider I attached hereto.

DELIVERY: F.O.B. BUYER'S WORKS IN Willow Springs, Illinois in Seller's tank cars or in tank trucks.

TERMS: NET 10th OF FOLLOWING MONTH

REMARKS: Buyer agrees to pay Shell's posted list price for Styrene Monomer as long as the prevailing carload price for General Purpose Crystal Grade of Polystyrene (as determined by the average of the prices posted by Dow and Monsanto) is 4¢ per pound above Shell's posted list price for Monomer in tank cars. Seller agrees to reduce the price of Styrene Monomer when necessary to maintain this 4¢ per pound margin provided that the tank car price to Buyer for Styrene Monomer hereunder shall never be less than 10¢ per pound, f.o.b. Buyer's works, Willow Springs, Illinois.

The Conditions of Sale set forth on the reverse side hereof form a part of this contract together with Rider I and Styrene Monomer specifications form a part of this contract.  
"SHELL CHEMICAL COMPANY" is a Division of, and means herein, SHELL OIL COMPANY, a Delaware corporation.

ACCEPTED:

DATED: November 15, 1961

BRAND PLASTICS COMPANY  
(NAME OF CONTRACTEE)

SHELL CHEMICAL COMPANY

By:

By:

Sales Manager

Title

Title Synthetic Rubber Division

EBLEB

RPACC000247

## CONDITIONS OF SALE

1. Quantity and/or weights of bulk tank car and tank truck shipments shall be based either on outage tables and appropriate temperature corrections or weighmaster's certificate. Deliveries shall be made via railway or automotive truck as Seller shall elect. The term "f.o.b. Buyer's works" when used in this contract means deliveries f.o.b. railway cars at carrier's nearest delivery point or at railway siding designated by Buyer, when via rail, and f.o.b. Buyer's plant, when via automotive truck.
2. Buyer shall give Seller reasonable notice covering shipments, and Seller shall not be required to tender delivery of any quantities for which Buyer has not given shipping instructions. Seller shall not be required to deliver in any month more than the specified monthly quantity or, if no monthly quantity is specified, more than the pro rata amount of the specified maximum quantity. Any portion of the maximum monthly quantity which Buyer fails to take in any month may, at Seller's option, be cancelled.
3. Buyer agrees to furnish and maintain safe and adequate facilities in all respects meeting all requirements of any applicable governmental law, rule or regulation, for receiving deliveries of and storing any products delivered hereunder in bulk by automotive trucks, and Buyer hereby releases Seller from any liability for, and agrees to indemnify Seller on account of, any claim for injury to or death of persons or damage to property in anywise resulting from or based upon Buyer's failure to comply with the foregoing provision.
4. Buyer shall pay Seller in United States par funds, without discount, for all goods delivered. Seller reserves the right, among other remedies, to suspend further deliveries in the event Buyer fails to pay for any one shipment when payment for same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
5. ~~The prices herein specified may be revised for any quarterly period commencing on the first days of January, April, July, and October after the date hereof (including the first such quarterly period) by written notice from Seller dispatched not less than 15 days prior to the date on which any such quarterly period is to commence. Buyer's failure to serve Seller with written notice of objection to proposed price revision prior to the beginning of any quarterly period shall be considered acceptance of such revision. In the absence of such written notice from the Seller to the Buyer regarding any contemplated adjustment of prices for the ensuing quarter, it is understood that the price then in effect shall continue in effect for the next quarter. Failure of Buyer and Seller to agree on proposed price revision after such notice by Seller releases Seller without obligation and permits Buyer to purchase elsewhere quantities required during the quarterly period in question.~~
6. If Buyer is offered material of equal quality at a price lower than stated herein and furnishes evidence of such lower price, the Seller will either meet such price or allow Buyer to purchase said material so offered, the amount so purchased to be deducted from the quantity specified herein.
7. Any excise tax imposed, and payable by Seller, on or measured by the manufacture, transportation or sale of the goods purchased by Buyer hereunder shall be paid by Buyer to Seller in addition to price specified herein.
8. Seller gives no guarantee of the suitability of the goods for any specific purpose, even if that purpose is known to him. Seller shall not be liable for any loss or damage resulting from the handling or use of the goods shipped hereunder whether in manufacturing processes or otherwise.
9. Unless otherwise stated, the goods purchased by Buyer hereunder are sold by Seller for Buyer's own consumption in the United States, and Seller may limit deliveries accordingly.
10. Either party hereto shall be absolved from its obligations under this contract when and to the extent that performance thereof is delayed or prevented by any cause, except financial, reasonably beyond such party's control, or by fire, explosion, breakdown of machinery or equipment, plant shut-down, riots, strikes, labor disputes, compliance with requirement of governmental authority, total or partial failure of the usual means of transportation of the products to be sold hereunder, or inability for any reason to obtain materials used in the manufacture of such products.
11. If any provision hereof is, or becomes, violative of any law, or rule, order or regulation issued thereunder, Seller shall have the right, upon notice to Buyer, to cancel such provision, without effect upon the other provisions, or to cancel further deliveries in their entirety.
12. Buyer's right to purchase any goods hereunder is not transferable nor assignable by Buyer without Seller's consent.
13. In the event of any breach by Buyer of any of the provisions of this contract, Seller shall have the right, in addition to any other rights or remedies it may have, to suspend deliveries hereunder or to terminate this contract.
14. This contract contains the entire understanding between Buyer and Seller for the purchase and sale of the material described herein and the same shall not be modified by acceptance by Seller of any purchase order issued by Buyer and containing terms or conditions inconsistent herewith. Neither this contract nor any subsequent agreement amending or supplementing this contract shall be binding on Seller unless and until it has been signed in Seller's behalf by a duly authorized representative; and commencement of performance hereunder or under any such subsequent agreement shall not constitute a waiver of this requirement.

RIDER I

TO STYRENE CONTRACT DATED NOVEMBER 15, 1961

BETWEEN

SHELL CHEMICAL COMPANY (SELLER)

A DIVISION OF SHELL OIL COMPANY

AND

BRAND PLASTICS COMPANY (BUYER)

On or before the 20th day of each December, March, June and September during the term hereof, Seller shall compute to the nearest one-hundredth of one cent and shall notify Buyer in writing of the price applicable for styrene for the next calendar quarter in accordance with the following formula:

- A. The base price shall be increased or decreased by a percentage thereof equal to thirty-five one-hundredths of the percentage change in Average Hourly Earnings for the Petroleum Refining Industry for production workers or nonsupervisory employees as shown in "Employment and Earnings", published by the Bureau of Labor Statistics, U. S. Department of Labor, from the average hourly earnings of \$3.02 per hour (the average of the hourly earnings published for the months of July, August and September, 1960). The average of the hourly earnings published for each month of the second preceding calendar quarter shall be used to compute the price for the next calendar quarter.
- B. If the per gallon tank car price of benzene (petroleum nitration grade) published for Port Arthur, Texas production in the "Oil, Paint and Drug Reporter" exceeds 34.0 cents per gallon f.o.b. Buyer's works, or is below 31.0 cents per gallon f.o.b. Buyer's works, the base price shall be increased by a percentage thereof equal to twenty-five one-hundredths of the percentage increase from 34.0 cents per gallon or shall be decreased by a percentage thereof equal to twenty-five one-hundredths of the percentage decrease from 31.0 cents per gallon. The price published in the last issue for the months of November, February, May and August shall be used to compute the price for the first succeeding calendar quarter beginning January 1, April 1, July 1 and October 1 respectively.

Should any of the indices or price series be discontinued or the base for the index or series be revised, then the Buyer and the Seller shall agree on a substitute basis for the escalation of the base price.

BPACC00249

*A. H. Jarrow*  
 (2) Shale

December 5, 1962

Brend Plastics Company  
 8400 Willow Springs Road  
 Willow Springs, Illinois

Gentlemen:

This is to confirm the discussions we have had with you during the past several weeks regarding our supplying your styrene monomer requirements.

You will recall that Paragraph 10 of our Loan & Supply Agreement with you of November 1, 1960, provides: "Until December 31, 1975, Arco shall have the right to supply Brend's requirements of all raw materials at prices no higher than those at which Brend could obtain materials of like quality and quantity from third parties."

Please be advised that we will be in a position to begin supplying part of your styrene monomer requirements at Willow Springs, Ill., and Torrance, Calif., beginning January 1, 1963, according to the following schedule in 1963:

	<u>Million Pounds</u> <u>Per Month</u>
1st Qtr.	2.0
2nd Qtr.	2.5
3rd Qtr.	3.0
4th Qtr.	3.0

31.5 MM 16  
 8 1963

We understand that during 1963 you may begin operations at locations other than Willow Springs, Ill., and Torrance, Calif. For any such new sites we believe that there is sufficient lead time for planning so that we may begin supplying the requirements at such new locations as soon as they begin operations.

Very truly yours,

*P. C. Livesay*

P. C. LIVESAY

cc: G. A. Brown  
 T. W. Hughes  
 L. G. Parkinson  
 G. Ringer ✓

January 1, 1963

INTERVIEW REPORT NO. 63-5

Synthetic Rubber Division  
Shell Chemical Company  
P. O. Box 216  
Torrance, California  
Phone: Davis 3-3030

**INTERVIEWED:**

J.E. (Bert) Toevs, Sales Manager  
F. (Fred) W. Hannsngen, R&D Manager  
Howard E. Hughes, Manufacturing Dept.  
P. (Pete) F. Quinn, Treasurer  
A. (Al) V. Snider, Mgr. Prod. Devlp.

**INTERVIEWED BY:**

G. Rieger  
R. D. Sieron

**DATE OF CALL:** January 7, 1963

**OBJECTIVE:** To offer Shell Chemical the opportunity to toll Amoco benzene to styrene in 1963 and to explore the possibility of supplying styrene to Brand Plastics' plant in Torrance, California through a swapout arrangement with Shell.

**SUMMARY:** Shell Chemical supplied most of the styrene consumed by Brand Plastics prior to Amoco's decision to enter the market this year. Although Shell had a three year requirements contract with Brand running through 1964, Shell honored Amoco's prior contract to supply Brand's styrene requirements.

Shell Chemical was offered the opportunity to submit a proposal within two weeks for converting Amoco benzene to styrene. The styrene volume offered to Shell was 25% of our requirements. It was proposed that a swapout be arranged on the benzene involved. Mr. Toevs said that although the Synthetic Rubber Division might be interested in such a proposal, timing and a desire by Shell to maximize the use of its own hydrocarbons were obstacles. We then expressed a willingness to consider purchasing Shell benzene for conversion to styrene. Mr. Quinn thought this would make a styrene toll arrangement more interesting to Shell. Since any such proposal would involve a product (benzene) not produced by the Synthetic Rubber Division, the parent company would have to become involved, specifically Mr. H. A. Mitchell. Unfortunately, Mr. Mitchell will be on vacation for two weeks and our timing needs could not be met. Mr. Toevs asked if we would consider drafting up a benzene - styrene conversion contract for Shell to sign, as a means of saving time. Guidelines of 0.86 pounds of benzene per pound of styrene and a conversion fee of 5.75¢/lb. styrene were given to Mr. Toevs.

Mr. Toevs said that we should consider the possibility of a styrene swapout arrangement with Shell as a means of supplying styrene to Brand Plastics at Torrance, California. Mr. Rieger said that Amoco was definitely interested in a swapout deal and that work on this aspect would be initiated should Shell have no interest in converting Amoco benzene into styrene.

BPACC00251

At Torrance, Shell has the capacity to produce 210 MM lb./yr. of styrene, 140 MM lb./yr. butadiene, 104,000 long tons/yr. of SBR, and 40 MM lb./yr. of polyisoprene. The Synthetic Rubber Division pays Shell Oil market price for the benzene consumed at Torrance. The Torrance facilities were constructed as part of the government synthetic rubber program of 1941. To provide some protection against immobilization of the entire plant by an air attack, two identical plants were built and the sections of each plant were spaced far apart. Dow designed and operated the styrene facilities for the government. Each styrene line was originally designed to produce 60 MM lb./yr.; rated capacity of each line is now 105 MM lb./yr.

When the government put the plant up for sale, various companies submitted bids on the styrene and SBR plants but no one bid on the butadiene plant. Shell offered 30 million dollars for the entire complex; the government accepted.

The styrene plant at Torrance consists of an ethylene unit which cracks propane and two styrene lines having separate alkylation, dehydrogenation, and finishing sections. The Shell complex covers approximately 200 acres and although it is impressive, one could not afford such a layout today. Mr. Toevs said that Shell 205 catalyst is used in the butadiene plant.

Shell moves styrene via water from Torrance to Houston and the East Coast. Mr. Toevs said that Shell's 40 MM lb./yr. polystyrene plant at Wallingford, Connecticut is not a very lucrative operation. This plant, which can produce both impact and GP polystyrene, was formerly owned by American Cyanamid.

Mr. Toevs forecasts only a modest growth for styrene in the next few years; from approximately 1.85 billion pounds in 1962 to 2.04 billion in 1966. He lists capacity announced or in place at 2.41 billion pounds. Inroads by polybutadiene, polyisoprene and EPR on SBR are the reasons for Mr. Toevs' forecast of a slowdown in styrene growth. He expressed the opinion that our decision to consider long-term tolling proposals is very sensible. Toevs said that Shell purchases tires from Firestone, Goodyear and U.S. Rubber.

Mr. Toevs said that American Rubber and Chemical has approximately 17 million dollars invested in its 40,000 long ton/yr. polybutadiene plant. He estimates that ARC is only selling 15,000 long tons/yr. and is hurting. Markets outside of tires have not materialized as expected.

NEXT STEPS: Consider allowing Shell one month additional time to investigate its interest in tolling Amoco benzene to styrene. Initiate discussions to establish a suitable styrene swapout agreement with Shell for our needs at Torrance.

  
R. D. Sieron

RDS:p

cc: G. Rieger

BPACC00252

January 23, 1963

Mr. J. E. Toews, Sales Manager  
Synthetic Rubber Division  
Shell Chemical Corporation  
P. O. Box 216  
Torrance, California

Dear Bert:

I am sorry that I have not written you sooner, but unforeseen travel plus the extent of consideration we have been giving some of the matters we discussed has prevented me from writing to you before now.

After careful consideration, we believe that it would be inappropriate for us to give you the type of pro forma contract that we discussed during my visit. You will recall that the reason for your wanting this, of course, was to speed up your consideration of tolling for us in view of the deadline we expressed during our meeting.

First, the deadline has eased considerably so that we believe you can proceed in the normal channels in your own organization without any loss in opportunity to become a toller for us. Second, the type of tolling arrangement we have today has sufficiently unique provisions so that any pro forma contract which was derived by simply leaving out key numbers in it would be a disservice to the toller's initiative in developing the provisions of the contract.

Rather we would prefer at this writing to confirm the "heads" of agreement which cover the salient points we believe you would have to respond to in any proposal to toll for us; and to lengthen the deadline for response from you to March 1 of this year. The heads of agreement are set forth in the attachment.

With respect to the situation with Brand at Torrance, we wish to exercise our option to supply them starting in February and would like to know what sort of trade-out arrangement we could set up with you starting this February and continuing until such time as we may conclude a tolling agreement.

For your planning purposes, we would want to move into Brand approximately 700,000 pounds per month for the balance of the year.

BPACC00253

Mr. J. E. Toews

- 2 -

January 23, 1963

Bob Sieron and I were pleased to have the opportunity to meet with you and your associates and to discuss the several areas of mutual interest which we covered. We hope that we can develop a styrene monomer relationship and look forward to meeting with you again -- preferably on the West Coast, of course!

Very truly yours,

George Rieger, Manager  
Market Research & Development

sjh

Attachment

cc: R. D. Sieron

bcc: L. C. Parkinson  
P. C. Lavesey

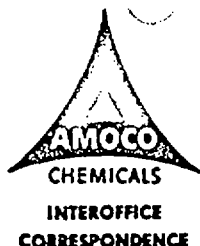
BPACC00253A



BENZENE CONVERSION TO STYRENE

Material:	Styrene Monomer, technical grade.
Quantity:	Approximately 25% of requirements or about 10 million pounds per year.
Term:	One year, evergreen, with 90 days before-end-of-year cancellation clause.
Conversion Ratio:	To be quoted -- usually is about 0.86 lbs. benzene per lb. styrene.
Conversion Fee:	To be quoted -- can be expressed as ¢/lb. styrene f.o.b. plants and/or terminals. Alternatively fee can be quoted similar to reseller arrangement where fee is quoted as a function of posted styrene price, freight allowance and benzene price. Fee is not mutually exclusive of conversion ratio and/or benzene shipping costs because three together determine overall economics of proposal.
Conversion Fee Escalation:	Proposal should contain provision for escalation of conversion fee with changes in posted price of styrene monomer due to other than changes in benzene price.
Terminals:	With respect to terminals, if conversion fee is not quoted f.o.b. such points, quote terminal surcharges.

# CONFIDENTIAL



TO: L. G. Parkinson Marketing Chicago  
Dept. Location  
SUBJECT: \_\_\_\_\_  
FILE REFERENCE \_\_\_\_\_ DATE February 1, 1963

You will recall that in a January 23 letter, a copy of which you received, I wrote Bert Toebs of Shell to advise him that while he was considering whether or not Shell wished to become a toller for us, we wished to begin supplying Brand at Torrance and wanted to know how we might trade-out with Shell.

Also in the letter I gave Toebs the major points we wished covered in any tolling agreement he might propose. He had requested a copy of our current tolling contract with proprietary information blanked out, but I thought this would be an inappropriate method of setting forth the principles of a tolling agreement.

Today I called Toebs to ask if he were in a position to answer my letter, particularly with regard to the trade-out. He avoided this question and went into the matter of a tolling arrangement which he said his people from Torrance were now discussing in New York. He said he still did not hold much hope that such an arrangement would ever be consummated.

When I brought him back to the subject of trade-out, he said that he would just as soon forget any arrangement except Shell's supplying Brand at Torrance and letting it go at that. When I pointed out that we were not so sure we wanted to leave it this way, he pleasantly but firmly advised that Shell was considering a suit against Amoco. I asked him to explain. Toebs said that their legal advisors claim that their three-year contract with Brand is an enforceable contract.

I asked if I should interpret this as meaning that they felt they should continue supplying Brand for the rest of the year at Torrance. Toebs countered with a comment that they intended to supply Brand at Torrance for the next two years; i.e., under the terms of the contract they contend is still in force with Brand. He said not only did they contend that they have this right, but that they contend that they also have the right to supply Brand at Willow Springs under the terms of this contract.

When asked on what grounds they felt they had a case for a suit against Amoco, he replied that their lawyers consider there are such grounds in view of our displacing them at Brand. He said he was no lawyer, and probably shouldn't be discussing this with me, but thought he ought to let

FROM: G. Rieger Marketing Chicago  
Dept. Location

February 1, 1963

me know that Shell is looking into the possibility of a suit with their legal advisors feeling that Brand's prior date contract with us means nothing because they, Shell, were not aware of it.

While my first reaction was to advise Toevs that under such conditions we might as well go ahead and supply Brand today from our terminals on the West Coast, instead I proposed to Toevs that we would talk with each other again in mid-February, the time at which Toevs said they will know what action they wish to take.

My interpretation of Toevs gambit is that he is citing the possibility of extreme action to set the stage for a compromise which would be our agreement to allow them to continue supplying Brand at Torrance. This would amount to yielding 8-12 million pounds per year for the next two years. Since we recognized this possibility some months ago, I believe we all are attuned to accept this as an amicable compromise with our friends at Shell.

Nevertheless, I feel that it is necessary to set down this conversation because we essentially have had a verbal threat of lawsuit over this situation, so we should have our legal people begin considering our current and future postures.

G. Rieger

sjh

cc: P. C. Livesay  
G. A. Brown  
R. D. Sieron

BPACC00256



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

P. O. BOX 216

TORRANCE, CALIFORNIA

TELEPHONE DAVIS 3-3030  
FACULTY 1-2340

SYNTHETIC RUBBER DIVISION

March 29, 1963

BRAND PLASTICS COMPANY  
8400 Willow Springs Road  
Willow Springs, Illinois

Attention Dr. J. L. McCurdy

Gentlemen:

Reference is made to your letter of February 25, 1963 handed to the writer by Dr. McCurdy on February 27, 1963.

In this letter you suggest that the existing November 15, 1961 contract whereby Brand has agreed to purchase from Shell all styrene monomer required during the years 1962, 1963 and 1964 at Brand's Willow Springs Plant for the manufacture of polystyrene was terminated by a "mutual understanding" reached at a December 12, 1962 luncheon meeting between the writer and Dr. McCurdy and further suggest that the writer subsequently "confirmed" such understanding by submitting for your consideration another contract covering your partial requirements.

According to the writer's clear recollection of the December 12, 1962 meeting, no mutual understanding was reached at that (or any other) time concerning termination of the November 15, 1961 contract. The most we did was to explore with you the possibility of superseding the existing Willow Springs contract with a mutually acceptable contract covering approximately 15 million pounds of your annual requirements at your Illinois and California plants. That the existing contract was to be terminated only if and when superseded by a new contract is evident from the express provisions contained in the proposed superseding contract submitted to you on December 27, 1962 that this contract supersedes and cancels contract dated November 15, 1961 between Buyer and Seller for styrene monomer.

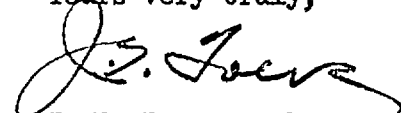
To summarize our position, the November 15, 1961 Willow Springs contract was and is a valid agreement on your part to buy and on our part to supply all of your Willow Springs requirements of styrene monomer through 1964; there has been no termination or modification of this contract by mutual understanding or otherwise; and we stand ready to perform our obligations under this contract and will look to you to perform yours.

BPACC00257

We do not wish to appear harsh in this matter and would regret the necessity of resorting to litigation to enforce our rights. In the interest of an amicable settlement we are still willing to discuss the possibility of releasing you from the Willow Springs total requirements contract if you will contract to purchase from us an equivalent quantity of your partial requirements of styrene monomer at your California, Illinois or other domestic U.S.A. plants (i.e., approximately 15 million pounds per year for three years from today's date).

We will appreciate hearing from you at your earliest convenience, and you may be sure that we too have appreciated our fine past business relationship and will do everything possible to continue that relationship.

Yours very truly,



J. E. Toevs, Sales Manager

cc/ Dr. J. L. McCurdy  
Brand Plastics Company  
1225 West 196th Street  
Torrance, California



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

SYNTHETIC RUBBER DIVISION

19253 SOUTH VERMONT AVENUE

P. O. BOX 216

TORRANCE, CALIFORNIA

INVOICE TRIPLICATE

IN REMITTING REFER TO:

INVOICE No. 93278

INVOICE DATE 4/30/63  
DATE SHIPPED 4/16-4/30/63 INCL.  
F. O. B. \_\_\_\_\_  
YOUR ORDER NO. W-2522  
OUR ORDER NO. W-1670  
SHIPPED FROM TORRANCE P  
SHIPMENT NUMBER \_\_\_\_\_

SOLD TO

BRAND PLASTICS  
1225 W. 196TH STREET  
TORRANCE, CALIFORNIA

SHIPPED TO SAME  
DESTINATION SAME  
VIA PIPELINE CAR INITIALS \_\_\_\_\_ NO. \_\_\_\_\_

WEIGHT: GROSS \_\_\_\_\_  
TARE \_\_\_\_\_  
NET \_\_\_\_\_  
DUNNAGE \_\_\_\_\_

PREPAID ☐ COLLECT ☒ TERMS NET CASH. NO DISCOUNT. PAYMENT TO BE MADE ON OR BEFORE 10TH OF MONTH FOLLOWING DELIVERY.

QUANTITY ORDERED	COMMODITY	QUANTITY SHIPPED	UNIT	PRICE	AMOUNT
	STYRENE-RUBBER GRADE (PER ATTACHED)	484,510	LBS.	.1046	\$50,679.75
	LESS FREIGHT EQUALIZATION			.0050	<u>2,422.55</u>
					\$48,257.20

Please Remit To:  
**SHELL CHEMICAL COMPANY**  
Lock Box 3833  
Rincon Annex  
San Francisco 20, Calif.

SHELL CHEMICAL COMPANY REPRESENTS THAT, WITH RESPECT TO THE PRODUCTION OF THE GOODS COVERED BY THIS INVOICE, IT HAS FULLY COMPLIED WITH ALL APPLICABLE PROVISIONS OF THE F.L.S.A., AS AMENDED AND ALL APPLICABLE REGULATIONS ISSUED THEREUNDER.



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

P. O. BOX 216

TORRANCE, CALIFORNIA

September 13, 1963

TELEPHONE DAVIS 3-3030  
FACULTY 1-2340

SYNTHETIC RUBBER DIVISION

Mr. R. L. Curtis and Dr. J. McCurdy  
Brand Plastics Corporation  
1225 West 196th Street  
Torrance, California

Gentlemen:

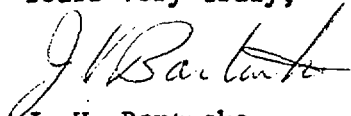
For the past two years we have been pleased to supply a portion of your requirements of styrene monomer. For some time you have shown increasing delinquency in making payment for these deliveries. We have made every reasonable effort to understand your situation, and have agreed to special payment arrangements to reduce accumulated past due obligations on terms very favorable to you.

By the end of June, when your balance reached \$263,445 and was showing still further delinquency, we again reviewed with you Brand's financial picture. On July 5 we accepted your proposal for reducing the past due indebtedness of your account. Not only have you failed to live up to this schedule, but you advised us on September 11 that you could make no cash payment against this large unpaid balance. This left us with no other alternative but to impose the following conditions on future sales of styrene monomer to you:

1. Shipments will be made on a cash in advance basis only.
2. We expect you to pay \$15,000 per week which will be applied against your existing balance.
3. These conditions will continue until your balance is reduced to approximately the value of two months purchases.

It was further understood that you will let us know not later than September 18 of your agreement to comply with these conditions or to submit an alternate arrangement for our consideration. Unless this deadline is met and satisfactory arrangements are made, it will be necessary for us to refer this matter to our attorneys for appropriate action.

Yours very truly,

  
J. V. Bartuska  
Credit Department

Delivered personally to R. L. Curtis

BPACC00260



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

P. O. BOX 216

TORRANCE, CALIFORNIA

TELEPHONE DAVIS 3-3030  
FACULTY 1-2340

SYNTHETIC RUBBER DIVISION

September 13, 1963

Mr. R. L. Curtis and Dr. J. McCurdy  
Brand Plastics Corporation  
1225 West 196th Street  
Torrance, California

Gentlemen:

For the past two years we have been pleased to supply a portion of your requirements of styrene monomer. For some time you have shown increasing delinquency in making payment for these deliveries. We have made every reasonable effort to understand your situation, and have agreed to special payment arrangements to reduce accumulated past due obligations on terms very favorable to you.

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3. These conditions will continue until your balance is reduced to approximately the value of two months purchases.

It was further understood that you will let us know not later than September 18 of your agreement to comply with these conditions or to submit an alternate arrangement for our consideration. Unless this deadline is met and satisfactory arrangements are made, it will be necessary for us to refer this matter to our attorneys for appropriate action.

Yours very truly,

*J. V. Bartuska*  
J. V. Bartuska  
Credit Department

*\* 240,000 now -  
195,000 in current  
148,000 in 60 days.  
are paying cash now.*

Delivered personally to R. L. Curtis

BPACC00261



SHELL CHEMICAL COMPANY

October 3, 1963

Addressed to: BRAND PLASTICS

On September 13th, 1963, we wrote to you explaining our position with respect to your delinquent account and asked that you submit an acceptable proposal by September 18th, 1963, which would discharge your obligation to Shell. You asked if this proposal could be deferred until September 23, 1963, because you needed the additional time to arrange future financing and we agreed to this time extension. During the period 9-13 to 9-23 we made cash deliveries of \$12,000.00 with no payment against your existing balance. On September 23, 1963, you proposed a payment schedule of cash for current shipments, plus 25% of the value of that shipment to be applied against your existing indebtedness. This calculated to a two-year pay-back. You also indicated at that time that current market prices for Polystyrene could only cause financial conditions with Brand to grow progressively worse and inevitably lead to possible liquidation. That afternoon you further confirmed the downward trend of Polystyrene prices in your telephone call to J. E. Toeves. In spite of your unrealistic pay-back proposal you were not willing to offer collateral so that our interests would be protected during the proposed pay-back period.

We have been working with you since June in an attempt to reduce your accumulated delinquency. We thought your proposal as confirmed by our letter of July 5th would accompany this, but your schedule was not maintained and your account now shows the following balances against you for no payments have been made since September 11th:

<u>Month</u>	April	\$ 25,757.20
	May	67,499.11
	June	33,792.28
	July	44,856.75
	August	42,739.85
	September	33,629.14
		<u>\$248,274.33</u>

Even though you mentioned the poor financial conditions of Brand, we continued to cooperate with you, hoping you would

BPACC00262

make the necessary effort to generate the means of discharging your obligations to Shell. We have a very sincere interest in seeing your business succeed and feel that we have extended every possible consideration in that direction. While we cannot accept your most recent pay-back proposal, we nevertheless made an additional cash shipment of \$5,000.00 on September 27th in the hope that a mutually satisfactory arrangement could be made to clear your obligations. Additionally, we released today \$5,000.00 worth of Styrene on the condition that you mail your check for \$10,000.00, the difference of which will be applied to your outstanding indebtedness.

We are now compelled to take the appropriate action necessary to protect our interests. To prevent this action, we extend to you one last opportunity to comply with the conditions outlined in our letter of September 13, 1963, or to offer a proposal which will protect our interest more than the one you extended to us on September 23, 1963.

Yours very truly,

J. V. BARTUSKA

Credit Manager

68-1  
RECEIVED OCT 31 1963

October 25, 1963

Brand Plastics Company  
1225 West 196th Street  
Torrance, California

Attention: Mr. R. L. Curtis

Gentlemen:

This is in response to your request that under the limitations contained in our existing agreements Brand be permitted to convert a limited amount of styrene monomer to polystyrene during the month of November, 1963, for the account of the Plastics and Resins Division of the Shell Oil Company according to the following specific provisions:

1. Monomer sufficient for, and only sufficient for, the production of 200,000 to 300,000 pounds be converted at Brand's Willow Springs polystyrene plant.
2. Shell shall always maintain title to the aforesaid monomer with bills of lading covering shipping to Brand's Willow Springs plant bearing the designation, "To The Plastics And Resins Division Of Shell Oil Company Care of Brand Plastics For Conversion To Polystyrene".
3. The polystyrene obtained by the conversion of the aforesaid monomer shall be packaged for Shell's account in plain bags bearing only the designation of the type of polymer.
4. The aforesaid polymer type designation shall not in any way be similar to the designation system of Brand.
5. The term of such an agreement with the Plastics and Resins Division of Shell Oil Company shall be only for the month of November, 1963.

RECEIVED

OCT 31 1963

R. L. BROWN

BPACC00264

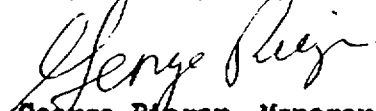
Brand Plastics Co.

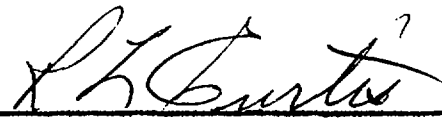
- 2 -

October 25, 1963

If the foregoing conforms in all respects to your understanding of our agreement, will you please signify by signing the enclosed copy in the space provided therefor and returning said copy to me.

Very truly yours,

  
George Rieger, Manager  
Market Development

BY 

DATE 10-28-63

BPACC00265

~~HHC~~  
GAB

RECEIVED OCT 31 1963

October 25, 1963

Brand Plastics Company  
1225 West 196th Street  
Torrance, California

Attention: Mr. R. L. Curtis

Gentlemen:

This is in response to your request that under the limitations contained in our existing agreements Brand be permitted to convert a limited amount of styrene monomer to polystyrene during the month of November, 1963, for the account of the Plastics and Resins Division of the Shell Oil Company according to the following specific provisions:

1. Monomer sufficient for, and only sufficient for, the production of 200,000 to 300,000 pounds be converted at Brand's Willow Springs polystyrene plant.
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3. The polystyrene obtained by the conversion of the aforesaid monomer shall be packaged for Shell's account in plain bags bearing only the designation of the type of polymer.
4. The aforesaid polymer type designation shall not in any way be similar to the designation system of Brand.
5. The term of such an agreement with the Plastics and Resins Division of Shell Oil Company shall be only for the month of November, 1963.

BPACC00266

Brand Plastics Co.

- 2 -

October 25, 1963

If the foregoing conforms in all respects to your understanding of our agreement, will you please signify by signing the enclosed copy in the space provided therefor and returning said copy to me.

Very truly yours,

*George Rieger*  
George Rieger, Manager  
Market Development

BY

*R. H. Burton*

DATE

*10-28-63*

BPACC00267

RECEIVED NOV 29 1963



PHONES: 321-9756 329-6379

PLASTICS CO.

1225 WEST 196th STREET

TORRANCE, CALIFORNIA 90503

November 27, 1963

Mr. George Rieger  
Amoco Chemicals Corporation  
130 East Randolph Drive  
Chicago 1, Illinois

Dear George:

As you can see I am back in California, having returned Sunday evening with Al Wallace after we determined that the reactor drive which we had been in doubt about was under-powered and we would have to wait for a replacement. The supplier who guaranteed it has applied major expediting action on the replacement and it now looks like they will have it in our hands by December 4th or shortly after.

We will both then return to Medina to get the operations under way. Everything else appears to be in good operating condition. An ammeter had still not arrived but had been shipped and was due to arrive early this week. We could get started without it however, using a clamp-on ammeter.

We had what I felt was an amazingly satisfactory attendance at our suite during the SPI National Convention. I was agreeably surprised although it got to be quite tiring service as the week wore on.

We have had an offer from a local color concentrate supplier to take our extruder off our hands for just what we paid for it. We have therefore written Union Carbide requesting them to permit us to ship the extruder to this new purchaser and for Carbide to bill them directly. It looks as if we can probably relieve ourselves from this obligation with very limited cost to ourselves.

As to the gentleman from New York who is an associate of the parties in Israel interested in a plant, I did not call him back but wrote him instead. It was explained that we did not feel in any position to provide a coordinator to assume responsibility for promoting such a project but that our field would be technical support, planning, operational training, and start-up assistance. We had felt that their associate in Israel was this man who would act as spear-head for the entire project. We expressed our hope that this would still be the case and we stood ready to lend our support to such a project.

BPACC00268

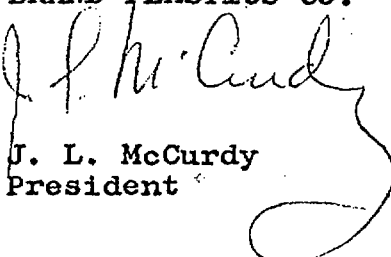
Mr. George Rieger  
November 27, 1963  
Page 2

I am enclosing a letter we received from Shell with reference to our contractual relationships. Also included is a copy of our short answer to the Shell letter. May we ask that please no one at Amoco take any action except thru us. Direct contact by Amoco prior to direct responsibility has confused and will continue to confuse the thinking of the parties involved.

We have heard nothing more of any action on the part of Amoco. I trust that the people involved can understand that we wait impatiently to get the inevitable accomplished. We trust you will do what you can to speed progress.

Sincerely,

BRAND PLASTICS CO.

  
J. L. McCurdy  
President

JLM/id  
Enc.

P.S. Have received a draft of the patent disclosure from Giles. I would you prompt Gilles to contact him and see that what he is covering is fundamental and desirable. He has so much writing that I must confess I'm confused and afraid he has lost the real significance of the idea being covered in the mass of writing somewhere. Will see Gilles on my next visit.

BPACC00269



Dictated by RLM  
from Calif. one place  
12/2/63

Dear Mr. McCurdy:

This will acknowledge your letter of November 26, 1963, advising that Brand Plastics is not in any position to consider the proposal outlined in our letter of November 20, 1963, and that you can only consider your previous verbal offer. Ordinarily, we would not consider your offer a representative exchange for your current obligation. However, as we have said many times, it is not our intent to place Brand Plastics in jeopardy. On the contrary, it is our intention to help you continue in business and eventually prosper.

We understand that you are not now in a position to fulfill your entire obligation to Shell. Therefore, we are prepared to accept the following:

1. You agree to continue with Shell for your styrene monomer requirements for a period of at least one year beginning January 1, 1963.
2. You agree that on or before December 10, 1963, you will pay to Shell approximately \$150,000 to reduce your current indebtedness. Future purchases will be paid within 60 days from date of invoice.
3. If you fully perform the above obligations, <sup>you</sup> we will release/~~from~~ all liability to us as outlined in our November 15, 1961, contract.

Please evidence your concurrence with the above by signing and returning to us a copy of this letter.

As indicated in the second paragraph of this letter, your past business with us is much appreciated, and we hope that the future will bring a continuation of our relationship.

November 26, 1963

Shell Chemical Company  
P. O. Box 216  
Torrance, California

Attention: J. E. Toevs  
Sales Manager

Gentlemen:

We presume that your letter of November 20 is your response to an offer made several weeks ago concerning our account. We must advise that our offer was a maximum offer, economic considerations prevent us from even considering any extended counter proposal. The offer made was our best effort to arrive at a logical and reasonable means of clearing a situation that has been apparently of great concern to you and which, due to your actions and threats of action has been of great stress to Brand.

Your acceptance or refusal ~~to accept our offer~~  
is respectfully requested.

Very truly yours,

BRAND PLASTICS CO.

J. L. McCurdy  
President

JLM/id

C  
O  
P  
Y



# SHELL CHEMICAL COMPANY

A DIVISION OF SHELL OIL COMPANY

P. O. BOX 216

TORRANCE, CALIFORNIA

November 20, 1963

TELEPHONE DAVIS 3-3030  
FACULTY 1-2340

SYNTHETIC RUBBER DIVISION

Brand Plastics  
1225 West 196th Street  
Torrance, California

Attention: Dr. J. L. McCurdy

Gentlemen:

As discussed during the conversation of November 7 between you and our Mr. J. P. Cunningham, we would like to summarize the present situation between our two companies and to submit our proposal as to how it may be resolved to the satisfaction of all concerned.

On November 15, 1961, you entered into a contract with us wherein you agreed to purchase and we to supply your requirements of styrene monomer at Willow Springs, Illinois during the period January 1, 1962 to December 31, 1964. These requirements were estimated at 20MM pounds for 1962 but not to exceed 30MM pounds per year thereafter, except at seller's option. Following execution of this contract, we made certain expenditures in storage and delivery facilities for the specific purpose of discharging our obligations under this contract. During the first thirteen months of the contract term you purchased a total of 12,767,336 pounds of styrene monomer from us for delivery to Willow Springs and have made no additional purchases since.

We have also cooperated with you in acquiring a plant site at Torrance adjacent to our plant and have installed a pipeline to deliver styrene monomer to you at that location. By letter dated March 29, 1963, we offered to release you from your obligation to purchase styrene monomer from us at Willow Springs if you would accept delivery at Torrance or other domestic plants, and offered to reduce the outstanding purchase commitment to approximately 15MM pounds per year for three years after that date.

Although our payment terms for styrene purchases are "net 10th of following month", we allowed you an extra 60 days with the understanding that by the end of 1962 you would have brought your account into line with our standard terms. During the past year, you have allowed your account with us to become excessively delinquent, and we have had occasion to call this to your attention verbally and by letter on numerous occasions. We have also worked closely with you in developing payment programs to

BPACC00272

improve this unsatisfactory situation, and have shown willingness to accept several proposals advanced by you. Unfortunately, you have failed to live up to these agreements, and so we have been compelled to advise you recently that unless a satisfactory arrangement is advanced and adhered to in the immediate future, we must have recourse to legal action.

You have indicated to us that it is now impossible for you to consider any reasonable repayment plan unless we are willing simultaneously to offer a significant reduction in your contract obligation to purchase styrene monomer from us. Having taken into account various unfavorable developments in your business which have affected your ability to defray your obligations, we are accordingly willing to advance the following proposal:

1. You agree to purchase not less than 20MM pounds of styrene monomer from us during the three-year period beginning December 1, 1963, at least one third of such amount to be purchased during the first year of such period and at least one half of the remainder during the second year.
2. You agree that on or before December 1, 1963 you will pay us a sufficient amount (approximately \$150,000.00) to reduce your account to a 60-day balance, and that you will pay for all future deliveries within 60 days from date of invoice and discharge any remaining balance of your account within 30 days following your receipt of the last of the 20MM pounds of styrene monomer.
3. If you fully perform the above agreements, we will relieve you of any further liability to us under the November 15, 1961 Willow Springs contract.

We believe you will find that this is a very reasonable proposal, and we are prepared to formalize this agreement as soon as you evidence your concurrence by signing and returning the attached duplicate copy of this letter.

Yours very truly,

Original signed by S. T. Raycraft  
for: J. E. Toevs  
Sales Manager

CONFIRMED AND AGREED:

BRAND PLASTICS

By \_\_\_\_\_

BPACC00273

any 11/30 @ 10  
\$ 122 758-85  
Oct 74200  
Nov 41500

## SHELL CHEMICAL COMPANY

P. O. Box 216

Torrance, California

November 29, 1963

Dr. J. L. McCurdy, President  
Brand Plastics Company  
1225 West 196th Street  
Torrance, California

C  
O  
P  
Y  
Dear Mr. McCurdy:

This will acknowledge your letter of November 26, 1963, advising that Brand Plastics is not in any position to consider the proposal outlined in our letter of November 20, 1963, and that you can only reaffirm your verbal offer made on October 22, 1963.

Ordinarily we would not consider your offer a representative exchange for your current obligations. However, as we have said many times, it is not Shell's intention to place either your interests or Brand's future in jeopardy. On the contrary, we have always cooperated with you in an effort to see Brand continue in business and eventually prosper. We understand that certain unfavorable developments in your business make it economically impossible for you to fulfill your entire obligation to Shell. Therefore we are prepared to accept your offer which was:

1. You agree to have Shell supply Brand's Torrance plant with its styrene monomer requirements for a period of at least one year beginning December 1, 1963.
2. You agree that on or before December 10, 1963, you will pay Shell a sufficient amount (approximately \$150,000) to reduce the Brand account to a 60-day balance and all future deliveries will be paid within 60 days from date of invoice.
3. If you fully perform the above agreements, we will relieve you of any future liability to us under the November 15, 1961 Willow Springs contract.

Please evidence your concurrence by signing and returning the attached duplicate of this letter.

Dr. J. L. McCurdy, President  
Brand Plastics Company

-2-

November 29, 1963

As indicated in the second paragraph of this letter, we again emphasize that your past business is much appreciated and we are most hopeful that this settlement will open new avenues to a continuation of our relationships.

Very truly yours,

J. E. Toevs  
Sales Manager

C  
O  
P  
Y  
CONFIRMED AND AGREED:  
BRAND PLASTICS COMPANY

By \_\_\_\_\_

December 3, 1963

Mr. J. E. Toevs  
Shell Chemical Company  
P. O. Box 216  
Torrance, California

Dear Mr. Toevs:

We are returning herewith a copy of your letter of November 29, 1963 signed as requested in recognition of our acceptance of the terms described. As discussed with you this morning such sales arrangements will be carried out completely in keeping with the conditions of sale as listed in your sales contract form particularly item 6 relative to maintaining competitive pricing of the material to be supplied.

We appreciate your efforts to cooperate in clarifying the confusion caused by the changing patterns of the polystyrene business.

Very truly yours,

BRAND PLASTICS CO.

J. L. McGurdy  
President

JLM/id

December 10, 1963

Mr. George Rieger,  
Amoco Chemicals Corp.,  
130 E. Randolph Drive,  
Chicago 1, Illinois.

Dear George:

In concluding our styrene monomer contract negotiations with Shell Chemical Co., we have today delivered to their Torrance office a check to bring our Torrance account within terms of 60 days, along with the signed copies of the one year contract for Brand's requirements at Torrance and the covering letter of December 7, 1963, signed by Dr. McCurdy.

They have in return handed back to us the original copy of the contract covering the period of December 1, 1963 through November 30, 1964, signed by J. E. Toevs.

Your assistance in this matter has been very much appreciated, and we hope it has now been settled to everyone's satisfaction.

Cordially yours,

BRAND PLASTICS CO.,

Robert L. Curtis

RLC:th

BPACC00277





# SHELL CHEMICAL COMPANY

P. O. Box 216  
Torrance, California

## CONTRACT

SHELL CHEMICAL COMPANY, hereinafter called "Seller," agrees to sell to

BRAND PLASTICS COMPANY

1225 West 196th Street

Torrance, California

hereinafter called "Buyer," and Buyer agrees to purchase from Seller merchandise herein described and according to the terms and conditions named below:

PERIOD: December 1, 1963 through November 30, 1964

PRODUCT: Styrene Monomer, specifications attached

QUANTITY: Buyer's requirements at its Torrance, California plant estimated at 10,000,000 pounds,

PRICE: 10.46 cents per pound f.o.b. Seller's Torrance, California plant freight equalized with styrene producing plant nearest Buyer's works or 10.66 cents per pound delivered Buyer's works, whichever is more favorable to Buyer.

DELIVERY: via pipeline to the junction of Seller's and Buyer's existing pipelines, title to all styrene delivered hereunder to pass at that ~~junction~~ junction. Quantities delivered hereunder will be determined by Seller from readings of Seller's tank gages with appropriate temperature corrections

TERMS: ~~NET 30 DAYS~~

REMARKS:

The Conditions of Sale set forth on the reverse side hereof form a part of this contract.

"SHELL CHEMICAL COMPANY" is a Division of, and means herein, SHELL OIL COMPANY, a Delaware corporation.

ACCEPTED:

DATED: 12-10-63

BRAND PLASTICS COMPANY  
(NAME OF CONTRACTEE)

By: J. J. McCurdy

Title: PRESIDENT

SHELL CHEMICAL COMPANY

By: J. E. Jones

Title: Sales Mgr.

EBLJT  
12563

BPACC00278

# CONDITIONS OF SALE

1. ~~Buyer shall give Seller reasonable notice covering shipments, and Seller shall not be required to tender delivery of any quantities for which Buyer has not given shipping instructions. Seller shall not be required to deliver in any month more than the specified monthly quantity or, if no monthly quantity is specified, more than the pro rata amount of the specified maximum quantity. Any portion of the maximum monthly quantity which Buyer fails to take in any month may, at Seller's option, be cancelled.~~
  2. Buyer shall give Seller reasonable notice covering shipments, and Seller shall not be required to tender delivery of any quantities for which Buyer has not given shipping instructions. Seller shall not be required to deliver in any month more than the specified monthly quantity or, if no monthly quantity is specified, more than the pro rata amount of the specified maximum quantity. Any portion of the maximum monthly quantity which Buyer fails to take in any month may, at Seller's option, be cancelled.
  3. Buyer agrees to furnish and maintain safe and adequate facilities in all respects meeting all requirements of any applicable governmental law, rule or regulation, for receiving deliveries of and storing any products delivered hereunder in bulk by automotive trucks, and Buyer hereby releases Seller from any liability for, and agrees to indemnify Seller on account of, any claim for injury to or death of persons or damage to property in anywise resulting from or based upon Buyer's failure to comply with the foregoing provision.
  4. Buyer shall pay Seller in United States par funds, without discount, for all goods delivered. Seller reserves the right, among other remedies, to suspend further deliveries in the event Buyer fails to pay for any one shipment when payment for same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
  5. The price herein specified may be revised for any quarterly period commencing on the first days of January, April, July and October after the date hereof (including the first such quarterly period), by written notice from Seller dispatched not less than 15 days prior to the date on which any such quarterly period is to commence. Buyer's failure to serve Seller with written notice of objection to proposed price revision prior to the beginning of any quarterly period shall be considered acceptance of such revision. In the absence of such written notice from the Seller to the Buyer regarding any contemplated adjustment of prices for the ensuing quarter, it is understood that the price then in effect shall continue in effect for the next quarter. Failure of Buyer and Seller to agree on proposed price revision after such notice by Seller, releases Seller without obligation and permits Buyer to purchase elsewhere quantities required during the quarterly period in question.
  6. If Buyer is offered material of equal quality at a price lower than stated herein and furnishes evidence of such lower price, the Seller will either meet such price or allow Buyer to purchase said material so offered, the amount so purchased to be deducted from the quantity specified herein.
  7. Any excise tax imposed, and payable by Seller, on or measured by the manufacture, transportation or sale of the goods purchased by Buyer hereunder shall be paid by Buyer to Seller in addition to price specified herein.
  8. Seller gives no guarantee of the suitability of the goods for any specific purpose, even if that purpose is known to him. Seller shall not be liable for any loss or damage resulting from the handling or use of the goods shipped hereunder whether in manufacturing processes or otherwise.
  9. Unless otherwise stated, the goods purchased by Buyer hereunder are sold by Seller for Buyer's own consumption in the United States, and Seller may limit deliveries accordingly.
  10. Either party hereto shall be absolved from its obligations under this contract when and to the extent that performance thereof is delayed or prevented by any cause, except financial, reasonably beyond such party's control, or by fire, explosion, breakdown of machinery or equipment, plant shut-down, riots, strikes, labor disputes, compliance with requirement of governmental authority, total or partial failure of the usual means of transportation of the products to be sold hereunder, or inability for any reason to obtain materials used in the manufacture of such products.
  11. If any provision hereof is, or becomes, violative of any law, or rule, order or regulation issued thereunder, Seller shall have the right, upon notice to Buyer, to cancel such provision, without effect upon the other provisions, or to cancel further deliveries in their entirety.
  12. Buyer's right to purchase any goods hereunder is not transferable nor assignable by Buyer without Seller's consent.
  13. In the event of any breach by Buyer of any of the provisions of this contract, Seller shall have the right, in addition to any other rights or remedies it may have, to suspend deliveries hereunder or to terminate this contract.
- Handwritten:* together with Seller's letter to Buyer of November 29, 1962
14. This contract contains the entire understanding between Buyer and Seller for the purchase and sale of the material described herein and the same shall not be modified by acceptance by Seller of any purchase order issued by Buyer and containing terms or conditions inconsistent herewith. Neither this contract nor any subsequent agreement amending or supplementing this contract shall be binding on Seller unless and until it has been signed in Seller's behalf by a duly authorized representative; and commencement of performance hereunder or under any such subsequent agreement shall not constitute a waiver of this requirement.

RECEIVED DEC 10 1963

PHONES: 321-9756 329-6379

BRAND PLASTICS CO.

1225 WEST 196th STREET

TORRANCE, CALIFORNIA

December 10, 1963

Mr. George Rieger,  
Amoco Chemicals Corp.,  
130 E. Randolph Drive,  
Chicago 1, Illinois.

Dear George:

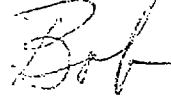
In concluding our styrene monomer contract negotiations with Shell Chemical Co., we have today delivered to their Torrance office a check to bring our Torrance account within terms of 60 days, along with the signed copies of the one year contract for Brand's requirements at Torrance and the covering letter of December 7, 1963, signed by Dr. McCurdy.

They have in return handed back to us the original copy of the contract covering the period of December 1, 1963 through November 30, 1964, signed by J. E. Toevs.

Your assistance in this matter has been very much appreciated, and we hope it has now been settled to everyone's satisfaction.

Cordially yours,

BRAND PLASTICS CO.,



Robert L. Curtis

RLC:h

BPACC00280

January 23, 1964

Shell Chemical Company  
110 West 51st Street  
New York 20, New York

Attention: Mr. D. N. Rindsberg  
Manager Operations

Dear Mr. Rindsberg:

C  
O  
P  
Y

We have, in keeping with the spirit of your letter of August 12, 1963 and our agreement of the same date, engaged to some limited extent in the conversion of your monomer to polymer at both Torrance, California and Willow Springs, Illinois. While the export portion of such business has involved no unsatisfactory factors the same cannot be said for the domestic part of this conversion arrangement. We have therefore decided that it is to our best interests to notify you of our desire to cease such conversion practice except in so far as you would desire any additional material in significant orders for export. We are extremely sorry that we find such action necessary but as originally discussed we feel it only sensible to call a halt as soon as such action is warranted rather than hesitate in making such a decision and thereby get our relationships more involved.

We shall continue to honor all orders on hand.

Very truly yours,

BRAND PLASTICS CO.

J. L. McCurdy  
President

JLM/id

BPACC00281

AGREEMENT FOR CONVERSION OF STYRENE MONOMER TO POLYSTYRENE RESINS

This is an agreement dated August 12, 1963, between SHELL CHEMICAL COMPANY, a Division of Shell Oil Company ("Shell") with offices at 110 West 51st Street, New York 20, New York, and BRAND PLASTICS COMPANY ("Brand") with offices at 1225 West 196th Street, Torrance, California.

1. Shell agrees to contract for the services of Brand, and Brand agrees to convert such quantities as Shell may request and Brand has capacity currently available to convert of styrene monomer supplied by Shell into various grades of general purpose and impact polystyrenes, according to Shell specifications listed in the attached Schedule A, in consideration of the following conversion fees, F.O.B. producing point and in Shell-supplied containers.

Conversion of styrene monomer to general purpose grades (including high heat general purpose)	3.0¢/lb.
Medium Impact Grades	4.5¢/lb.
High Impact Grades	5.0¢/lb.

2. This agreement shall become effective upon the first delivery of styrene monomer by Shell to Brand and shall continue for a primary period until December 31, 1963, and from year to year thereafter; either party being able to terminate at the end of the primary period ~~or of any subsequent~~ *plus* ~~contract year~~ by giving the other at least 90 days' written notice.
3. Shell agrees to deliver, prepaid to Brand's producing point, styrene monomer meeting specifications according to the attached Schedule B. Brand's producing points are Torrance, California; Chicago, Illinois; and one under construction in Medina, Ohio. Brand further agrees to

allow Shell to select, insofar as capacity is available, the producing point which minimizes freight cost to Shell.

4. Brand agrees to make the specified grade of polystyrene available to Shell, or to an agent of Shell, at the producing point, in pelletized form, lubricated to Shell's specification, in a Shell-supplied container, in such quantities as Shell may desire.
5. Brand further agrees to return to Shell one-pound of specification polystyrene for each pound of styrene monomer provided to Brand by Shell. Brand agrees to provide all additives, including SBR rubber, internal and external lubricants, antioxidants, and stabilizers necessary for Brand's purposes herein.
6. Brand agrees to provide pellets uniform in size, approximately 1/8" in diameter by 1/8" in length, and if required by Shell, a dry coloring granulation approximately 1/16" in diameter by 1/16" in length.
7. Brand agrees to fill containers to tolerances as follows:

50 pound multiwall paper bags	± 4 ounces
200 pound fiber drums	± 1 pound
1,000 pound cartons	± 2 pounds
8. Brand agrees to provide Shell with 20,000-pound minimum lots of uniform material and agrees to provide a five-pound minimum composite sample of each lot of polystyrene produced for Shell, to Shell Chemical Company, Post Office Box 176, Wallingford, Connecticut, within ten (10) calendar days after the lot has been packaged. Shell is to be advised by Brand in writing of analytical and physical properties determined on lots

produced for Shell within ten (10) calendar days after the lot has been packaged.

9. Brand agrees to grant to Shell at all times a conversion fee at least as low as the fee being charged by Brand to anyone for converting styrene to polystyrene.
10. Brand will invoice Shell monthly and net payment of such invoices will be due within ten (10) days after receipt by Shell of such invoice.
11. Brand shall replace all products failing to meet specifications as provided in Schedule A, attached hereto, upon verification of the validity of such a claim. All such products shall be returned to a plant or warehouse designated by Brand at Brand's expense. Shell waives any claims with reference to product delivered hereunder unless notice of such claim is given to Brand within sixty (60) days of receipt by Shell of a complaint with reference thereto by a Shell customer.
12. Brand agrees to supply Shell with grades having some specific variation of the properties offered by Brand providing quantities of product to be committed are over 50,000 pounds. Further, Brand agrees to supply Shell with samples of Brand's other commercial grades and any new grades or formulations of polystyrene resins developed for evaluation purposes, which new grades may be samples to customers or resold by Shell unless Brand specifically requests otherwise.
13. We recognize that it may be to our mutual interest to review the field of this agreement if the nature of the business changes

materially. Shell and Brand are prepared to discuss possible changes should this occasion arise.

ACCEPTED: SHELL CHEMICAL COMPANY  
A Division of Shell Oil Company

By Frank J. Watson, Sr. Title  
Date Aug 12, 1963

BRAND PLASTICS COMPANY

By \_\_\_\_\_ Title

Date \_\_\_\_\_



## SCHEDULE A

### Polystyrene.

BRAND PLASTICS CO. polystyrenes are classed according to type of polymer, flow grade, pellet size and surface treatment of the pellets.

**TYPE OF POLYMER:** The first character in the material designation denotes the type of polymer; i.e.,

- G - General Purpose polystyrene
- H - High Impact polystyrene
- M - Medium Impact polystyrene
- R - Heat Resistant polystyrene

**FLOW GRADE OF POLYMER:** The second character denotes flow grade of the polymer; i.e.,

- 1 - Regular flow
- 2 - Easy flow
- 3 - Extrusion grade

**PELLET SIZES:** The third character identifies size and type of pellet of BRAND polystyrenes.

- P - Standard pellet, 1/8" x 1/8"
- C - Colorant pellet, 1/16" x 1/16"
- F - Fine grind, approx. 1/32" x 1/32"

**SURFACE TREATMENT:** The fourth character denotes amount and intended purpose of surface lube on pellets.

- 1 - Dustless, no surface lube
- 2 - Single quantity surface lube
- 3 - Dry Coloring special treatment
- 4 - Double Quantity surface lube

**THUS:** As an example, BRAND PLASTICS CO. polystyrene identified as G2-C3 is General Purpose crystal, easy flow, colorant pellet, with special surface treatment for best results in dry coloring.

# SCHEDULE A

The following properties are considered to be typical average values.

			General Purpose G1	General Purpose G2	High Impact H2
Tensile Strength	psi.	D638	6,150	5,050	4,100
		58T			
Elongation	%	D638	1.6	1.5	40
		58T			
Modulus in Tension	psi.	D638	465,000	445,000	345,000
		58T			
Izod impact str. (Injection Mld.)	ft. lb. per in.	D256	.45	.45	3.0
		-56			
Deflection Temp. under load 264 psi. As molded	F.	D648			
		-56	168	165	167
Annealed			189	185	186
Hardness (Rockwell)	M	D785	72	72	18
		-51			
Heat Distortion (Vicat)	F		198	195	193
Melt viscosity $\eta_7$	Poises		1,400	750	1,000
Coef. of linear thermal expansion	in/in/ F	D696	400,000	400,000	470,000
		-44			
Specific Gravity			1.04	1.04	1.05

# SCHEDULE A

## PHYSICAL PROPERTY SPECIFICATIONS

	<u>General Purpose</u>	<u>Medium Impact</u>	<u>High Impact</u>
Visual Appearance	Free of haze	Opaque	Opaque
Color	Colorless	White	White
Dirt Rating	Commercially free	Commercially free	Commercially free

Product must be equivalent in physical properties and moldability characteristics to the representative samples labelled as follows:

Brand Plastics  
Crystal Polystyrene  
G<sub>2</sub>C<sub>3</sub> Lot WA-52  
Bag 1

Brand Plastics  
Medium Impact  
M<sub>2</sub>C<sub>3</sub> Lot WB-61  
Bag 2

Brand Plastics  
High Impact  
H<sub>2</sub>C<sub>3</sub> Lot WB-44

SHELL CHEMICAL COMPANY  
A Division of Shell Oil Company

By Frank E. Watson Gen'l Mgr  
Date Aug 12, 1963  
Title

BRAND PLASTICS COMPANY

By \_\_\_\_\_  
Date \_\_\_\_\_  
Title

# SCHEDULE B

## SHELL STYRENE MONOMER SPECIFICATIONS

PURITY (by Freezing point) % minimum by weight	99.20
ALDEHYDES (as benzaldehyde) % maximum by weight	0.03
PEROXIDE (as $H_2O_2$ ) % maximum by weight	0.01
SULFUR (as S) % maximum by weight	0.005
CHLORIDES (as Cl) % maximum by weight	0.015
POLYMER CONTENT % maximum by weight	0.005
SOLUBILITY OF POLYMER in benzene	Complete
INHIBITOR (Para-tertiary butylcatechol)	
Minimum - ppm	10
Maximum - ppm	15
COLOR	
Maximum - APHA	20

10-28-86

RGQ

~~SSS~~

~~JOH~~

~~BTJ~~

TORRANCE

GEN

BILL KERR → RGQ

MOVED RAILROAD TRACK - EXCAVATION FOUND OIL  
~ 2' DOWN. (PROBABLY FROM <sup>OLD</sup> SHELL OIL REFINERY, WHICH  
IS NOW INDUSTRIAL PARK)

BPACC00290

OK full

SECOND SUPPLEMENTAL AGREEMENT

THIS SECOND SUPPLEMENTAL AGREEMENT is made as of the 27th day of June, 1963, by and between STANDARD OIL COMPANY, an Indiana corporation (herein called "Standard"), AMOCO CHEMICALS CORPORATION, a Delaware corporation (herein called "Amoco"), BRAND PLASTICS COMPANY, a Delaware corporation (herein called "Brand"), J. L. McCURDY, Palos Verdes Estates, California (herein called "McCurdy"), and R. L. CURTIS, Arcadia, California (herein called "Curtis").

RECITALS

On November 1, 1960, the above-named parties entered into a certain Loan and Supply Agreement providing, among other things, that Brand would construct a plant for the manufacture of polystyrene, that Standard would lend or procure for Brand a loan of funds for such purpose and that Amoco would have the right to supply Brand with certain necessary materials. Said Loan and Supply Agreement further provides the conditions and manner in which Standard or Amoco may acquire all of the stock of Brand.

On January 4, 1961, the above-named parties entered into a Construction Loan Agreement to implement the loan provisions of the Loan and Supply Agreement, providing among other things, for the construction by Brand of a polystyrene manufacturing plant upon a site in Cook County, Illinois, and providing for a secured loan by Standard to Brand of amounts not exceeding in the aggregate \$750,000.00 (hereinafter referred to as "Original Loan") for the purpose of constructing such a plant and providing working capital.

In furtherance of the transaction and as provided in said Loan and Supply Agreement and Construction Loan Agreement, McCurdy and Curtis, on January 4, 1961, executed and delivered an Indemnification and Guaranty Agreement to Standard, Amoco and Brand, and a Pledge Agreement to Standard

On January 19, 1961, Standard, with the consent of Brand, McCurdy and Curtis, assigned and transferred to Amoco all of the rights under the above-described Construction Loan Agreement and the several agreements executed and delivered pursuant to Section 9 thereof, except that Standard retained with Amoco the right to any benefits arising under Section 3 of the Construction Loan Agreement and Paragraph 1 of the Indemnification and Guaranty Agreement. Amoco assumed and agreed to discharge all of Standard's duties and obligations arising under the said Construction Loan Agreement.

On January 20, 1961, Brand executed and delivered to Amoco Brand's Promissory Note in the principal amount of \$750,000. As security for the payment of said Note, Brand executed and delivered to Amoco on the same date a Real Estate Mortgage on the real property of Brand situated in Cook County, Illinois, and a Chattel Mortgage on the chattels then or thereafter located on said real property.

On June 26, 1962, the parties hereto entered into a Supplemental Agreement providing, among other things, for an Additional Loan from Amoco to Brand in the amount of \$225,000.00 for the purpose of financing construction of a polystyrene manufacturing plant in Los Angeles County, California.

On June 26, 1962, Brand executed and delivered to Amoco Brand's Promissory Note in the principal amount of \$225,000.00. As security for payment of said Note, Brand executed and delivered to Amoco on the same date a Deed of Trust on the real property of Brand situated in Los Angeles County, California, and a Chattel Mortgage on the chattels then and thereafter located on said real property.

Brand has now expressed to Standard and Amoco its desire to increase and expand its manufacturing and selling activities of polystyrene and products fabricated therefrom through construction of an additional manufacturing plant to be located at Medina, Ohio, and to accomplish said expansion desires to borrow an additional \$400,000.00 (hereinafter referred

to as the "Second Additional Loan"), thereby increasing its total loan from Amoco to an amount in the aggregate not exceeding \$1,375,000.00. Standard and Amoco are in accord with Brand's proposed expansion program, and Amoco is willing to lend Brand an additional \$400,000.00 for such purpose. All parties are agreed that the Second Additional Loan shall be subject, so far as not inconsistent, to all of the provisions, covenants, rights and limitations contained in the several instruments above described pertaining to Original Loan and Additional Loan, as the same are amended herein, and in addition shall be subject to the provisions of this Second Supplemental Agreement.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, and for good and valuable consideration,

IT IS AGREED as follows:

1. Amoco agrees to lend to Brand, from time to time as requested by Brand, an additional amount not exceeding \$400,000.00, and Brand agrees to use the proceeds of said Second Additional Loan exclusively for the construction of a polystyrene manufacturing plant at Medina, Ohio, as hereinafter provided.

2. The Second Additional Loan to be made by Amoco to Brand shall be evidenced by Brand's Promissory Note substantially in the form attached hereto as Exhibit A. The Note shall evidence only the actual indebtedness of Brand to Amoco under this Second Supplemental Agreement, and in the event Brand borrows less than \$400,000.00 hereunder the principal installments of \$40,000.00 as required by the said Note to be paid on each January 1 and July 1, commencing January 1, 1966, shall be proportionately reduced. Brand's Promissory Note shall be secured by a First Mortgage and a Chattel Mortgage, substantially in the forms attached hereto as Exhibits B and C, on the Medina, Ohio plant site and the personal property and chattels to be located thereon. Said First Mortgage and Chattel Mortgage shall be recorded in the office of the County Recorder, Medina County, Ohio, and Brand agrees to furnish Amoco with a Mortgagee's policy of insurance issued by Lawyer's Title Insurance Corporation, Richmond, Virginia, in their usual form,



insuring that said First Mortgage is a valid and enforceable first lien on the said real property, and showing there are no restrictions on the property which would prohibit or limit the construction and operation of said plant. Brand will also obtain a letter from Lawyer's Title Insurance Corporation setting forth present zoning of the land hypothecated by said First Mortgage, which letter shall show there are no zoning restrictions prohibiting or limiting construction and operation of said plant.

3. In the event both McCurdy and Curtis die, then upon the death of the second of them all obligation of Amoco to lend such additional sums as Amoco then remains obligated to lend pursuant to this Second Supplemental Agreement shall terminate.

4. If either McCurdy or Curtis dies, then within ten days after Brand's receipt of the proceeds of insurance hereinafter referred to on the life of the deceased, Brand shall forthwith prepay, without premium, one-half of the principal indebtedness of Brand to Amoco then outstanding, together with accrued and unpaid interest thereon. Upon such prepayment, the remaining indebtedness of Brand to Amoco hereunder shall be payable in equal principal installments on the terms contained in the Note. If both McCurdy and Curtis die, then within ten days after Brand's receipt of the proceeds of the insurance hereinafter referred to on the life of the second of them to die, Brand shall forthwith prepay, without premium, all the indebtedness of Brand to Amoco then outstanding hereunder, together with accrued and unpaid interest thereon.

At any time after January 1, 1966, Brand may, at its option, and without notice to Amoco, prepay all or any part of the indebtedness of Brand to Amoco hereunder without premium.

5. It is mutually agreed by the parties hereto that the existing amount of coverage provided by the life insurance on the lives of McCurdy and Curtis with Brand as beneficiary as set forth in Paragraph 5C of the

Loan and Supply Agreement and 4 (d) of the Construction Loan Agreement, both hereinbefore referred to, shall be increased to \$1,000,000 on the life of each, and said insurance shall provide the same protection and have the same application to Second Additional Loan as provided for Original Loan and Additional Loan. The beneficiary of such insurance shall not be changed without the written prior consent of Amoco.

6. It is mutually agreed by the parties hereto that Paragraphs 4 a, b, c, d, e and g; Paragraphs 5 b, c and d; Paragraph 6 and unnumbered paragraphs thereunder; Paragraph 7 and unnumbered paragraphs thereunder; and Paragraphs 8, 9, 10, 11, 12, 13, 14, 15, and 16, all of the Loan and Supply Agreement above described between the parties hereto dated November 1, 1960, pertaining to the Original Loan, are incorporated by reference in this Second Supplemental Agreement, as the same are amended herein, and shall have equal application and effect with respect to the Second Additional Loan.

7. It is further mutually agreed by the parties hereto that Paragraphs 3 (a), (b), (c), (d) and (e); Paragraphs 4 (a), (b), (c), (d), (f) and (g); Paragraphs 5 (a), (b), (c), (d), (f), (g), (h), (i), (j), (k) and (l), but without the exception stated in (l); Paragraphs 6, 7, 10 and 11, all of the Construction Loan Agreement above described between the parties hereto dated January 4, 1961, as the same have been amended herein, pertaining to the Original Loan, are incorporated by reference in this Second Supplemental Agreement and shall have equal application and effect with respect to the Second Additional Loan. Where required by context the terms "Real Estate", "Plant" and "Work" shall be deemed to apply to the Medina, Ohio site, the plant to be erected thereon, and the construction thereof.

8. It is further mutually agreed by the parties hereto that the following amendments shall be made to the existing agreements referred to above:

The first lines of Paragraphs Nos. 4 and 5 of the Loan and Supply Agreement between the parties hereto, dated

November 1, 1960, are amended to provide as follows:

"Until December 31, 1965 and thereafter until....."

Paragraph No. 4.f. of the said Loan and Supply Agreement and Paragraph No. 5.e. of the Construction Loan Agreement between the parties hereto, dated January 4, 1961, are amended to provide as follows:

4.f. and 5.e. - Manufacture or sell any products other than impact and crystal polystyrene and pipe fabricated therefrom, or enter into tolling or other arrangements with others providing for the conversion of styrene monomer belonging to others into polystyrene for their use.

Paragraphs Nos. 6, 7, 8, and 10 of the said Loan and Supply Agreement between the parties hereto, dated November 1, 1960, are amended to provide as follows:

6. At any time during the eighteen (18) month period commencing June 30, 1964 and ending December 31, 1965, Standard upon ninety (90) days' written notice to McCurdy and Curtis shall have an option to acquire not earlier than September 30, 1964 from McCurdy and Curtis, their heirs, executors, administrators or assigns, all of the outstanding stock of Brand at a value per share equal to the original paid-in capital contribution per share plus an amount equal to two and one-half (2-1/2) times Brand's per share earnings (after provision for payment of all taxes) for any period of twelve (12) consecutive months as determined below:

(a) If, during the period commencing June 30, 1964 and ending December 31, 1964, Standard gives notice of its intention to acquire such stock, McCurdy and Curtis may select any consecutive twelve (12) month period terminating not later than June 30, 1964.

(b) If, during the period commencing January 1, 1965 and ending December 31, 1965, Standard gives notice of its intention to acquire such stock, McCurdy and Curtis may select

any consecutive twelve (12) month period terminating not later than three (3) months prior to date of notification. In the event of the failure of McCurdy and Curtis to select such twelve (12) month period within thirty (30) days after receipt of written notice from Standard of Standard's intention to acquire said shares, Standard shall have the right to designate said twelve (12) month period. If said option is exercised, said stock of Brand shall be acquired in exchange for capital stock of Standard. The exchange value per share of Standard Oil Company stock shall be the average of the daily closing prices per share on the New York Stock Exchange for each day of the calendar month, in which such stock is traded on said exchange, immediately preceding the month in which Standard notifies McCurdy and Curtis in writing of its intention to exercise its option. The per share earnings used in computing the value per share of Brand stock shall be based on sound corporate accounting practices regardless of whether this conflicts with accounting practices used for income tax purposes.

In the event that during the aforesaid option period Standard shall elect not to exercise the above-mentioned option and shall so notify McCurdy, Curtis and Amoco, Amoco shall thereupon have a like option to acquire from McCurdy and Curtis, their heirs, administrators, executors or assigns all of the outstanding shares of Brand for cash at a price equal to the value of such stock computed as in the preceding paragraph of this Section 6.

Between the date of notice by either Standard or Amoco of intention to exercise its option and the date of acquisition, McCurdy and Curtis shall make available to the party exercising the option all of their technical information and know-how relating to the construction and operation of the plants and to the production and marketing of polystyrene and pipe fabricated therefrom.

Standard or, in the alternative, Amoco shall each have an additional option to acquire the stock of Brand during the period January 1, 1966 through December 31, 1968, as provided in Section 7 below.

7. At any time during the period January 1, 1966 through December 31, 1968, Standard shall have the option to acquire, on ninety (90) days' written notice to McCurdy and Curtis of its election to exercise said option, from McCurdy and Curtis, their heirs, executors, administrators or assigns, in exchange for stock of Standard, all of the outstanding stock of Brand (except stock previously sold or transferred pursuant to Section 8 below) at a value per share equal to the original paid-in capital contribution per share plus an amount equal to two and one-half ( $2\frac{1}{2}$ ) times Brand's per share earnings (after provision for payment of all taxes) for any period of twelve (12) consecutive months selected by McCurdy and Curtis and terminating not later than three (3) months prior to the date of acquisition as above provided, and minus an amount equal to the total of all dividends per share paid prior to the date of such acquisition in excess of one-quarter ( $\frac{1}{4}$ ) of any year's per share earnings and also minus an amount equal to the total combined salaries and other compensation of McCurdy and Curtis in excess of ONE HUNDRED THOUSAND DOLLARS (\$100,000.00) per year divided by the number of shares then outstanding. The provisions of Section 6 above relating to selection of a twelve (12) month period in the event of the failure of McCurdy and Curtis to do so, the method for determining the exchange value of Standard Oil Company stock (using closing prices during the month of either May or November, as the case may be), and the making available to Standard of technical information and know-how between the date of notice and the acquisition date, shall all apply, mutatis mutandis in the case of the exercise of the option provided for in this Section 7.

In the event that during the option period provided in the foregoing paragraph Standard shall elect not to exercise said option and shall so notify McCurdy, Curtis and Amoco, Amoco shall thereupon have a like option to acquire such shares from McCurdy, Curtis, their heirs, administrators, executors or assigns for cash at a price equal to the value of such stock computed as in the preceding paragraph of this Section 7.

8. At any time during the period January 1, 1966 through December 31, 1975 that McCurdy, Curtis or their respective heirs, executors, administrators or assigns wish to transfer any or all of the stock of Brand owned by such person regardless of whether or not such person has received an offer to purchase such shares, and provided Brand is willing to pay to Amoco the full amount of all loans and other indebtedness owed by Brand to Amoco including accrued interest, and further provided neither Standard or Amoco have served notice of intention to exercise its option as above provided, the person so desiring to transfer said shares shall first notify Amoco in writing stating in such notice the number of shares desired to be transferred and the price per share at which such person is willing to make such transfer. Said notice shall also be accompanied by a tender by Brand of the total amount of all loans and other indebtedness owed by Brand to Amoco including accrued interest. Amoco shall have the right within sixty (60) days after receipt of said notice to purchase all of the shares so offered at the price per share stated in said notice. In the event that Amoco fails to exercise said right by written notice to the person making said offer within said sixty (60) day period, the person making said offer shall have the right for a period of six (6) months after the expiration of said sixty (60) day period to transfer all but not less than all the shares so offered to Amoco to a third party provided,

however, that such transfer shall be for a price per share no lower than the price per share stated in the notice to Amoco and further provided that at the time of such transfer to a third party Amoco shall have been paid the amount of all loans and other indebtedness owed by Brand to Amoco including accrued interest. In the event that no such transfer shall be made to a third party within said six (6) month period, the right to make a transfer to third parties shall terminate and no such transfer of any shares of Brand shall thereafter be made by the person having had such right unless Amoco is again given notice and the procedures and requirements established by this section are repeated.

10. Until December 31, 1975, Amoco shall have the right to supply Brand's total requirements of all raw materials at prices no higher than those at which Brand could obtain its total requirements of such materials of like quality and quantity from third parties who do not have a financial or other investment interest in Brand.

The said Loan and Supply Agreement between the parties hereto dated November 1, 1960 shall be further amended by adding thereto a new paragraph numbered seventeen (17), providing as follows:

17. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto.

9. It is further mutually understood and agreed by the parties hereto that the provisions of the Pledge Agreement and the Indemnification and Guaranty Agreement hereinabove referred to between the parties hereto, both dated January 4, 1961, shall secure and have equal application and effect with respect to the Second Additional Loan.

10. In addition to the foregoing, Brand, McCurdy and Curtis specifically represent, warrant and agree as follows with respect to the Second Additional Loan:

A. Brand agrees to use the proceeds of the Second Additional Loan exclusively for the construction of a plant for the manufacture of polystyrene and pipe to be fabricated therefrom upon the following described tract of land in the Township of Boardman, County of Medina, State of Ohio, and known as being a part of Medina City Lot No. 1833, bounded and described as follows:

Beginning at an iron pin set in the East Line of Medina City Lot No. 1833 and in the North R/W of West Smith Road (60 feet); thence S-89° 08' 48"-W with the North R/W of West Smith Road, a distance of 353.51 feet to an iron pin set in the East Line of land now or formerly owned by Theodore J. Erabusa; thence N-0° 51' 12"-W, a distance of 735.35 feet to an iron pin found at the Northeast corner of said Erabusa's land in the Southerly Right-of-Way of The A.C.&Y. Railroad; thence N-71° 45' 33"-E in a curve to the Right having a radius of 3,544.47 feet, a chord distance of 389.19 feet to an iron pin found at the Northeast corner of said Lot No. 1833; thence S-0° 21' 00"-W, a distance of 851.86 feet to the point of beginning and containing therein 6.617 acres of land as surveyed April 10, 1963 by Henry L. Perry, Registered Surveyor No. 4420.

Brand warrants that it has good, clear and unencumbered marketable fee simple title to said land, and that there are no zoning or other restrictions prohibiting or limiting the construction and operation of said polystyrene manufacturing plant. Brand further represents that it has obtained a policy of title insurance on said land issued by the Lawyer's Title Insurance Corporation, Richmond, Virginia, containing no exceptions which



would materially impair the use of the property for the purposes above set forth.

B. Brand warrants that the total cost of construction of said plant shall not exceed \$400,000, and Brand shall use its best efforts to cause the construction of the plant to be completed and the plant to be in operation or ready for operation as a going concern not later than January 1, 1964. If requested by Amoco, Brand shall furnish to Amoco a certificate of a person or firm acceptable to Amoco, estimating the cost of completion of the Medina, Ohio plant, with reasonable supporting detail, and stating that the amounts to be subsequently loaned by Amoco to Brand for such construction shall be sufficient to pay the cost of such completion free of all liens.

C. Brand agrees that it shall not, without the written approval of Amoco, manufacture at said Medina, Ohio plant, or sell therefrom, any products other than impact and crystal polystyrene and pipe fabricated therefrom.

D. Brand agrees to furnish Amoco with a complete copy of the plans and specifications of the plant and copies of all building permits and licenses required by law as and when issued.

E. Brand, McCurdy and Curtis jointly and severally represent and warrant to Amoco that the construction and operation of the aforescribed Medina, Ohio plant, and the manufacture and sale of polystyrene and pipe fabricated from polystyrene, will not constitute a breach of any contract or of any fiduciary obligation on the part of Brand, McCurdy or Curtis, and will not infringe or interfere with any proprietary rights in patents, patent applications, inventions, discoveries, processes, formulae, trade secrets, know-how or other rights, common law or statutory, held by any third persons or corporations.

F. Until December 31, 1965 and thereafter until Standard or Amoco shall acquire all of the outstanding stock of Brand, or until the Second Additional Loan provided for herein shall be repaid in full, whichever shall first occur, McCurdy and Curtis agree to use their best efforts to manage Brand and its Medina, Ohio plant in a proper manner, to promote the business and market the product thereof, to keep products and services in all respects competitive, to devote as much of their time as shall be necessary to such endeavors, and not to enter into any other employment or business arrangement without the written approval of Amoco.

G. Brand, McCurdy and Curtis jointly and severally represent and warrant to Amoco and Standard that Brand is duly qualified to do business in the State of Ohio as a foreign corporation and is in good standing.

11. Brand, McCurdy and Curtis agree to execute and furnish to Amoco and Standard such other documents and instruments necessary and appropriate to effect the purposes of this Second Supplemental Agreement as counsel for Amoco or Standard shall reasonably require.

12. Brand, McCurdy and Curtis shall not assign or transfer any of their rights or obligations under this Second Supplemental Agreement without the prior written consent of Amoco.

13. References made in the Supplemental Agreement between the parties hereto, entered into as of the 26th day of June, 1962, to the said Loan and Supply Agreement and Construction Loan Agreement shall be deemed to be references to such agreements and the provisions thereof as herein amended.

WITNESS the due execution hereof by the parties hereto on the date first above written.

ATTEST:

Earl W. Russell  
Secretary

STANDARD OIL COMPANY,  
an Indiana corporation

By Wesley W. Cudd *W. W. C.*  
~~Executive~~ Vice President

ATTEST:

*R. L. Brumby*  
Secretary

AMOCO CHEMICALS CORPORATION,  
a Delaware corporation

By *R. L. Livsey*  
President

ATTEST:

*R. L. Curtis*  
Secretary

BRAND PLASTICS COMPANY,  
a Delaware corporation

By *J. L. McCurdy*  
President

*J. L. McCurdy*  
J. L. McCurdy

*R. L. Curtis*  
R. L. Curtis

## SUPPLEMENTAL AGREEMENT

THIS SUPPLEMENTAL AGREEMENT is made as of the 26th day of June, 1962, by and between STANDARD OIL COMPANY, an Indiana corporation (herein called "Standard"), AMOCO CHEMICALS CORPORATION, a Delaware corporation (herein called "Amoco"), BRAND PLASTIC COMPANY, a Delaware corporation (herein called "Brand"), J. L. McCURDY, Northridge, California (herein called "McCurdy"), and R. L. CURTIS, Hinsdale, Illinois, (herein called "Curtis").

### RECITALS

On November 1, 1960, the above-named parties entered into a certain Loan and Supply Agreement providing, among other things, that Brand would construct a plant for the manufacture of polystyrene, that Standard would lend or procure for Brand a loan of funds for such purpose, and that Amoco would have the right to supply Brand with certain necessary raw materials. Said Loan and Supply Agreement further provides the conditions and manner in which Standard or Amoco may acquire all of the stock of Brand.

On January 4, 1961, the above-named parties entered into a Construction Loan Agreement to implement the loan provisions of the Loan and Supply Agreement, providing, among other things, for the construction by Brand of a polystyrene manufacturing plant upon a site in Cook County, Illinois, and providing for a secured loan by Standard to Brand of amounts not exceeding in the aggregate \$750,000.00 (hereinafter referred to as "Original Loan") for the purpose of constructing such a plant and providing working capital.

In furtherance of the transaction and as provided in said Loan and Supply Agreement and Construction Loan Agreement, McCurdy and Curtis, on January 4, 1961, executed and delivered an Indemnification and Guaranty Agreement to Standard, Amoco and Brand, and a Pledge Agreement to Standard.

On January 19, 1961, Standard, with the consent of Brand, McCurdy and Curtis, assigned and transferred to Amoco all of its rights under the above-described Construction Loan Agreement and the several agreements executed and delivered pursuant to Section 9 thereof, except that Standard retained with Amoco the right to any benefits arising under Section 3 of the Construction Loan Agreement and Paragraph 1 of the Indemnification and Guaranty Agreement. Amoco assumed and agreed to discharge all of Standard's duties and obligations arising under the said Construction Loan Agreement.

On January 20, 1961, Brand executed and delivered to Amoco Brand's Promissory Note in the principal amount of \$750,000.00. As security for the payment of said Note, Brand executed and delivered to Amoco on the same date a Real Estate Mortgage on the real property of Brand situated in Cook County, Illinois, and a Chattel Mortgage on the chattels then or thereafter located on said real property.

The parties hereto, as of the date hereof, have complied with the various provisions of all of the aforesaid agreements, and none of the parties are in default to the others.

Brand has now expressed to Standard and Amoco its desire to increase and expand its manufacturing and selling activities of polystyrene and products fabricated therefrom to the west coast of the United States, and to accomplish said expansion desires to borrow an additional \$225,000.00 (hereinafter referred to as the "Additional Loan"), thereby increasing its total loan from Amoco to an amount in the aggregate not exceeding \$975,000.00. Standard and Amoco are in accord with Brand's proposed expansion program, and Amoco is willing to lend to Brand an additional \$225,000.00 for such purpose. All parties are agreed that the Additional Loan shall be subject, so far as not inconsistent, to all of the provisions, covenants, rights and limitations contained in the several instruments above described pertaining to Original Loan, and in addition shall be subject to the provisions of this Supplemental Agreement.

NOW THEREFORE, in consideration of the mutual promises hereinafter set forth, and for good and valuable consideration,

IT IS AGREED as follows:

1. Amoco agrees to lend to Brand, from time to time as requested by Brand, an additional amount not exceeding \$225,000.00, and Brand agrees to use the proceeds of said Additional Loan exclusively for the construction of a polystyrene manufacturing plant on the west coast of the United States as hereinafter provided.

2. The Additional Loan to be made by Amoco to Brand shall be evidenced by Brand's Promissory Note substantially in the form attached hereto as Exhibit A. The Note shall evidence only the actual indebtedness of Brand to Amoco under this Supplemental Agreement, and in the event Brand borrows less than \$225,000.00 hereunder the principal installments of \$22,500.00 as required by the said Note to be paid on each January 1 and July 1 commencing January 1, 1965, shall be proportionately reduced. Brand's Promissory Note shall be secured by a First Deed of Trust and a Chattel Mortgage, substantially in the forms attached hereto as Exhibits B and C, on the west coast plant site and the personal property and chattels to be located thereon. Said First Deed of Trust and Chattel Mortgage shall be recorded in the office of the County Recorder, Los Angeles County, California, and Brand agrees to furnish Amoco with an A.T.A. lender's policy of insurance issued by Title Insurance and Trust Company, a California corporation, insuring that said First Deed of Trust is a valid and enforceable first lien on the said real property, and showing there are no restrictions on the property which would prohibit or limit the construction and operation of said plant. Brand will also obtain a letter from Title Insurance and Trust Company setting forth present zoning of the land hypothecated by said First Deed of Trust, which letter shall show there are no zoning restrictions prohibiting or limiting construction and operation of said plant.

3. In the event both McCurdy and Curtis die, then upon the death of the second of them all obligation of Amoco to lend such additional sums as Amoco then remains obligated to lend pursuant to this Supplemental Agreement shall terminate.

4. If either McCurdy or Curtis dies, then within ten days after Brand's receipt of the proceeds of insurance hereinafter referred to on the life of the deceased, Brand shall forthwith prepay, without premium, one-half of the principal indebtedness of Brand to Amoco then outstanding, together with accrued and unpaid interest thereon. Upon such prepayment, the remaining indebtedness of Brand to Amoco hereunder shall be payable in equal principal installments on the terms contained in the Note. If both McCurdy and Curtis die, then within ten days after Brand's receipt of the proceeds of the insurance hereinafter referred to on the life of the second of them to die, Brand shall forthwith prepay, without premium, all the indebtedness of Brand to Amoco then outstanding hereunder, together with accrued and unpaid interest thereon.

At any time after January 1, 1965, Brand may, at its option, and without notice to Amoco, prepay all or any part of the indebtedness of Brand to Amoco hereunder without premium.

5. It is mutually agreed by the parties hereto that the existing amount of coverage provided by the life insurance on the lives of McCurdy and Curtis with Brand as beneficiary as set forth in Paragraphs 5c of the Loan and Supply Agreement and 4 (d) of the Construction Loan Agreement, both hereinbefore referred to, is adequate to cover both Original Loan and Additional Loan, and said insurance shall provide the same protection and have the same application to Additional Loan as provided for Original Loan. The beneficiary of such insurance shall not be changed without the written prior consent of Amoco.

6. It is mutually agreed by the parties hereto that Paragraphs 4 a, b, c, d, e and g; Paragraphs 5 b, c and d; Paragraph 6 and unnumbered paragraphs thereunder; Paragraph 7 and unnumbered paragraphs thereunder; and Paragraphs 8, 9, 10, 11, 12, 13, 14, 15 and 16, all of the Loan and Supply Agreement above described between the parties hereto dated November 1, 1960, pertaining to the Original Loan, are incorporated by reference in this Supplemental Agreement and shall have equal application and effect with respect to the Additional Loan.

7. It is further mutually agreed by the parties hereto that Paragraphs 3 (a), (b), (c), (d) and (e); Paragraphs 4 (a), (b), (c), (d), (f) and (g); Paragraphs 5 (a), (b), (c), (d), (f), (g), (h), (i), (j), (k) and (l), but without the exception stated in (l); Paragraphs 6, 7, 10 and 11, all of the Construction Loan Agreement above described between the parties hereto dated January 4, 1961, pertaining to the Original Loan, are incorporated by reference in this Supplemental Agreement and shall have equal application and effect with respect to the Additional Loan. Where required by context the terms "Real Estate", "Plant" and "Work" shall be deemed to apply to the west coast site, the plant to be erected thereon, and the construction thereof.

8. It is further mutually understood and agreed by the parties hereto that the provisions of the Pledge Agreement and the Indemnification and Guaranty Agreement hereinabove referred to between the parties hereto, both dated January 4, 1961, shall secure and have equal application and effect with respect to the Additional Loan.

9. In addition to the foregoing, Brand, McCurdy and Curtis specifically represent, warrant and agree as follows with respect to the Additional Loan:

A. Brand agrees to use the proceeds of the Additional Loan exclusively for the construction of a plant for the manufacture of polystyrene and pipe to be fabricated therefrom upon the following described tract of land located in the City of Los Angeles, County of Los Angeles, State of California:

PARCEL 1: The Easterly 258 feet of the westerly 467 feet of the South 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

PARCEL 2: The Northerly 12-1/2 feet of the Easterly 258 feet of the Westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.



RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

PARCEL 3: A non-exclusive easement for the purpose of ingress and egress and for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

PARCEL 4: An easement for location and placement of underground utilities and/or sewer lines and for the purpose of laying, maintaining, operating and removing at any time a line or lines of pipe, together with the right of ingress and egress to excavate land for, construct, maintain, attend and/or remove said pipe line or lines with respect to the northerly 5 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county.

EXCEPT the West 467 feet of said lot.

Brand warrants that it has good, clear and unencumbered marketable fee simple title to said land, and that there are no zoning or other restrictions prohibiting or limiting the construction and operation of said polystyrene manufacturing plant. Brand further represents that it has obtained a policy of title insurance on said land issued by the Title Insurance and Trust Company, a California corporation, containing no exceptions which would materially impair the use of the property for the purposes above set forth.

B. Brand warrants that the total cost of construction of said plant shall not exceed \$225,000.00, and Brand shall use its best efforts to cause the construction of the plant to be completed and the plant to be in operation or ready for operation as a going concern not later than November 1, 1962. If requested by Amoco, Brand shall furnish to Amoco a certificate of a person or firm acceptable to Amoco, estimating the cost of completion of the west coast plant, with reasonable supporting detail, and stating that the amounts to be subsequently loaned by Amoco to Brand

for such construction shall be sufficient to pay the cost of such completion free of all liens.

C. Brand agrees that it shall not, without the written approval of Amoco, manufacture at said west coast plant, or sell therefrom, any products other than impact and crystal polystyrene and pipe fabricated therefrom.

D. Brand agrees to furnish Amoco with a complete copy of the plans and specifications of the plant and copies of all building permits and licenses required by law as and when issued.

E. Brand, McCurdy and Curtis jointly and severally represent and warrant to Amoco that the construction and operation of the aforescribed west coast plant, and the manufacture and sale of polystyrene and pipe fabricated from polystyrene, will not constitute a breach of any contract or of any fiduciary obligation on the part of Brand, McCurdy or Curtis, and will not infringe or interfere with any proprietary rights in patents, patent applications, inventions, discoveries, processes, formulae, trade secrets, know-how or other rights, common law or statutory, held by any third persons or corporations.

F. Until December 31, 1964, and thereafter until Standard or Amoco shall acquire all of the outstanding stock of Brand, or until the Additional Loan provided for herein shall be repaid in full, whichever shall first occur, McCurdy and Curtis agree to use their best efforts to manage Brand and its west coast plant in a proper manner, to promote the business and market the products thereof, to keep products and services in all respects competitive, to devote as much of their time as shall be necessary to such endeavors, and not to enter into any other employment or business arrangement without the written approval of Amoco.

G. Brand, McCurdy and Curtis jointly and severally represent and warrant to Amoco and Standard that Brand is duly qualified to do business in the State of California as a foreign corporation and is in good standing.

10. Brand, McCurdy and Curtis agree to execute and furnish to Amoco and Standard such other documents and instruments necessary and

appropriate to effect the purposes of this Supplemental Agreement as counsel for Amoco or Standard shall reasonably require.

11. Brand, McCurdy and Curtis shall not assign or transfer any of their rights or obligations under this Supplemental Agreement without the prior written consent of Amoco. Amoco and Standard may exercise all powers and authority granted to them under this Supplemental Agreement without any liability on their part.

WITNESS the due execution hereof by the parties hereto on the date first above written.

ATTEST:

*D. B. Sanford*  
Assistant Secretary

STANDARD OIL COMPANY,  
an Indiana corporation

By *Robert C. Loomis* *RCL*  
Executive Vice President

ATTEST:

*R. L. Brown*  
Secretary

AMOCO CHEMICALS CORPORATION,  
a Delaware corporation

By *B. Livesay* *BL*  
President

ATTEST:

*R. L. Curtis*  
Secretary

BRAND PLASTICS COMPANY,  
a Delaware corporation

By *J. L. McCurdy*  
President

*J. L. McCurdy*  
J. L. McCurdy

*R. L. Curtis*  
R. L. Curtis

**BRAND PLASTICS COMPANY  
5-1/4% INSTALLMENT NOTE**

**\$225,000.00**

**Chicago, Illinois  
June 26, 1962**

**FOR VALUE RECEIVED, the undersigned, BRAND PLASTICS CO., a Delaware corporation, also known as Brand Plastics Company (hereinafter called the Company), hereby promises to pay to the order of AMOCO CHEMICALS CORPORATION, a Delaware corporation, the principal sum of Two Hundred Twenty-Five Thousand Dollars (\$225,000.00), payable in 10 installments of \$22,500.00 each on each January 1 and July 1, commencing January 1, 1965.**

**Interest shall accrue on the unpaid principal of this Note at the rate of 5-1/4% per annum from the date hereof, until the principal on this Note shall be fully paid. Such interest shall become due and payable on each January 1 and July 1, commencing January 1, 1963, and if not so paid to be compounded from date of default and bear the same rate of interest as the principal.**

**Payments of both principal and interest are to be made at 130 East Randolph Drive, Chicago 1, Illinois, or at such other place as the holder hereof shall from time to time designate to the undersigned, in lawful money of the United States of America.**

**This Note is issued pursuant to a Supplemental Agreement, dated June 26, 1962, between the Company, Standard Oil Company, an Indiana corporation, Amoco Chemicals Corporation, a Delaware corporation, J. L. McCurdy and R. L. Curtis, to which Supplemental Agreement reference is made for a statement of the terms and conditions under which the loan evidenced hereby was made and is to be repaid and under which the due date of this Note may be accelerated.**

**This Note is secured by, and is subject to the terms of a Deed of Trust of even date herewith to the Payee on real estate, and a Chattel Mortgage of even date hereto on the chattels located thereon, in the County of Los Angeles, State of California.**

**BRAND PLASTICS CO.**

**By J. L. McCurdy /s/  
Its President**

**By R. L. Curtis /s/  
Its Secretary**



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## DEED OF TRUST

This Deed of Trust made this 26th day of June, 1962, between BRAND PLASTICS CO., also known as Brand Plastics Company, a Delaware corporation, herein called Trustor whose address is 8400 Willow Springs Road, Willow Springs, Illinois, TITLE INSURANCE AND TRUST COMPANY, a California corporation, herein called Trustee, and AMOCO CHEMICALS CORPORATION, a Delaware corporation, herein called Beneficiary.

WITNESSETH: That Trustor irrevocably grants, transfers and assigns to Trustee in trust, with power of sale, that property in Los Angeles County, California, described as:

**PARCEL 1:** The Easterly 258 feet of the westerly 467 feet of the South 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county.

**PARCEL 2:** The Northerly 12-1/2 feet of the Easterly 258 feet of the Westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

**PARCEL 3:** A non-exclusive easement for the purpose of ingress and egress and for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

**PARCEL 4:** An easement for location and placement of underground utilities and/or sewer lines and for the purpose of laying, maintaining, operating and removing at any time a line or lines of pipe, together with the right of ingress and egress to excavate land for, construct, maintain, attend and/or remove said pipe line or lines with respect to the northerly 5 feet of the south 3 acres of Lot 5 of Tract No. 4671, in

the county of Los Angeles, state of California, as per map recorded in book 56, pages 30 and 31 of maps, in the office of the county recorder of said county.

**EXCEPT** the West 467 feet of said lot.

Together with all buildings, improvements, fixtures and all apparatus, equipment or articles used to supply heat, gas, air conditioning, water, light, power, refrigeration (whether single units or centrally controlled), and ventilation, now, or hereafter placed thereon, hereinafter referred to as Premises, and the rents, issues and profits thereof, subject, however, to the right, power and authority hereinafter given to and conferred upon Beneficiary to collect and apply such rents, issues and profits.

**For the Purpose of Securing:**

1. Performance of each agreement of Trustor herein contained.
2. Payment of the indebtedness evidenced by one promissory note of even date herewith, and any extension or renewal thereof, in the principal sum of \$225,000.00 executed by Trustor in favor of Beneficiary.

**To Protect the Security of This Deed of Trust, Trustor Agrees that:**

1. Trustor shall (1) promptly repair, restore or rebuild any buildings or improvements now or hereafter on the premises which may become damaged or be destroyed; (2) keep said premises in good condition and repair, without waste, and free from mechanic's or other liens or claims for lien not expressly subordinated to the lien hereof; (3) pay when due any indebtedness which may be secured by a lien or charge on the premises superior to the lien hereof, and upon request exhibit satisfactory evidence of the discharge of such prior lien to the Beneficiary; (4) complete within a reasonable time any building or buildings now or at any time in process of erection upon said premises; (5) comply with all requirements of law or municipal ordinances with respect to the premises and the use thereof; (6) make no material alterations in said premises except as required by law or municipal



ordinance; (7) not remove or demolish any buildings thereon.

2. Trustor shall pay before any penalty attaches all general taxes, and shall pay special taxes, special assessments, water charges, sewer service charges, and other charges against the premises when due, and shall, upon written request, furnish to the Beneficiary duplicate receipts therefor. To prevent default hereunder Trustor shall pay in full under protest, in the manner provided by statute, any tax or assessment which Trustor may desire to contest; and Trustor shall pay all costs, fees and expenses of this Trust.

3. Trustor shall furnish to the Beneficiary within 90 days after the close of each of Trustor's fiscal years audited statements of a reputable public accounting firm, showing the results of Trustor's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

4. Trustor shall do none of the following acts without the written approval of the Beneficiary:

(a) Enter into any contract which is for a term in excess of two years or which commits Trustor to the expenditure of more than \$50,000, or make capital expenditures in excess, in the aggregate, of \$30,000 in any six month period;

(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, or enter into any lease whatsoever;

(c) Pay dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Trustor's net earnings, after taxes, earned subsequent to the date hereof;

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness;

(e) Manufacture or sell any products other than impact and crystal polystyrene and pipe fabricated therefrom;

(f) Pay salaries and other compensation to its stockholders (including persons related to them by blood, adoption, or mar-

riage and to firms and corporations in which any of them have a substantial interest) in excess, in the aggregate, of \$100,000 in any fiscal year;

(g) Become a guarantor of any obligations of any other person or entity;

(h) Sell any notes or accounts receivable, with or without recourse;

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity;

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business;

(k) Create or participate in the creation of any joint venture, corporation or other entity;

(l) Enter into any sale and lease-back transaction.

5. Trustor shall keep all buildings and improvements now or hereafter situated on said premises insured against loss or damage by fire, with extended coverage, under policies providing for payment by the insurance companies of moneys sufficient either to pay the cost of replacing or repairing the same or to pay in full the indebtedness secured hereby, all in companies satisfactory to the Beneficiary, under insurance policies payable in case of loss or damage to Beneficiary, such rights to be evidenced by the standard mortgage or deed of trust clause to be attached to each policy, and shall deliver all policies, including additional and renewal policies, to Beneficiary, and in case of insurance about to expire, shall deliver renewal policies not less than ten days prior to the respective dates of expiration. The amount collected under any fire or other insurance policy may be applied by Beneficiary upon any indebtedness secured hereby and in such order as Beneficiary may determine, or at option of Beneficiary the entire amount so

collected or any part thereof may be released to Trustor. Such application or release shall not cure or waive any default or notice of default hereunder or invalidate any act done pursuant to such notice.

6. In case of default therein, Beneficiary or Trustee may, but need not, make any payment or perform any act hereinbefore required of Trustor in any form and manner deemed expedient, and may, but need not, make full or partial payments of principal or interest on prior encumbrances, if any, and purchase, discharge, compromise or settle any tax lien or other prior lien or title or claim thereof, or redeem from any tax sale or forfeiture affecting said premises or contest any tax, or assessment, or appear in and defend any action or proceeding purporting to affect the security hereof or the rights or powers of Beneficiary or Trustee. All moneys paid for any of the purposes herein authorized and all expenses paid or incurred in connection therewith, including attorneys' fees, and any other moneys advanced by Beneficiary or Trustee to protect the premises and the lien hereof, shall be so much additional indebtedness secured hereby and shall become immediately due and payable without notice and with interest thereon at the rate of seven per cent per annum. Inaction of Beneficiary or Trustee shall never be considered as a waiver of any right accruing to it on account of any default hereunder on the part of Trustor. By accepting payment of any sum secured hereby after its due date, Beneficiary does not waive its right either to require prompt payment when due of all other sums so secured or to declare default for failure so to pay.

7. Any award of damages in connection with any condemnation for public use of or injury to said premises or any part thereof is hereby assigned and shall be paid to Beneficiary who may apply or release such moneys received by him in the same manner and with the same effect as above provided for disposition of proceeds of fire or other insurance.

8. Beneficiary or Trustee in making any payment hereby

authorized relating to taxes or assessments, may do so according to any bill, statement or estimate procured from the appropriate public office without inquiry into the accuracy of such bill, statement or estimate or into the validity of any tax, assessment, sale, forfeiture, tax lien or title or claim thereof.

9. At any time or from time to time, without liability therefor and without notice, upon written request of Beneficiary and presentation of this Deed and said note for endorsement, and without affecting the personal liability of any person for payment of the indebtedness secured hereby, Trustee may: reconvey any part of said premises; consent to the making of any map or plat thereof; join in granting any easement thereon; or join in any extension agreement or any agreement subordinating the lien or charge hereof.

10. Upon written request of Beneficiary stating that all sums secured hereby have been paid, and upon surrender of this Deed and said note to Trustee for cancellation and retention and upon payment of its fees, Trustee shall reconvey, without warranty, the premises then held hereunder. The recitals in such reconveyance of any matters or facts shall be conclusive proof of the truthfulness thereof. The grantee in such reconveyance may be described as "the person or persons legally entitled thereto." Five years after issuance of such full reconveyance, Trustee may destroy said note and this Deed (unless directed in such request to retain them).

11. As additional security, Trustor hereby gives to and confers upon Beneficiary the right, power and authority, during the continuance of this Trust, to collect the rents, issues and profits of said premises, reserving unto Trustor the right, prior to any default by Trustor in payment of any indebtedness secured hereby or in performance of any agreement hereunder, to collect and retain such rents, issues and profits as they become due and payable. Upon any such default, Beneficiary may at any time without notice, either in person,

by agent, or by a receiver to be appointed by a court, and without regard to the adequacy of any security for the indebtedness hereby secured, enter upon and take possession of said premises or any part thereof, in his own name sue for or otherwise collect such rents, issues and profits, including those past due and unpaid, and apply the same, less costs and expenses of operation and collection, including reasonable attorney's fees, upon any indebtedness secured hereby, and in such order as Beneficiary may determine. The entering upon and taking possession of said premises, the collection of such rents, issues and profits and the application thereof as aforesaid, shall not cure or waive any default or notice of default hereunder or invalidate any act done pursuant to such notice.

12. Upon default by Trustor in payment of any indebtedness secured hereby within 10 days after the same becomes due, or in breach of performance of any agreement hereunder, which breach is not remedied within 10 days after written notice from Beneficiary, Beneficiary may declare all sums secured hereby immediately due and payable by delivery to Trustee of written declaration of default and demand for sale and of written notice of default and of election to cause to be sold said premises, which notice Trustee shall cause to be filed for record. Beneficiary also shall deposit with Trustee this Deed, said note and all documents evidencing expenditures secured hereby.

After the lapse of such time as may then be required by law following the recordation of said notice of default, and notice of sale having been given as then required by law, Trustee, without demand on Trustor, shall sell said premises at the time and place fixed by it in said notice of sale, either as a whole or in separate parcels, and in such order as it may determine, at public auction to the highest bidder for cash in lawful money of the United States, payable at time of sale. Trustee may postpone sale of all or any portion of said premises by public announcement at such time and place of sale, and from time to time thereafter may postpone such sale by public announcement at the

time fixed by the preceding postponement. Trustee shall deliver to such purchaser its deed conveying the premises so sold, but without any covenant or warranty, express or implied. The recitals in such deed of any matters or facts shall be conclusive proof of the truthfulness thereof. Any person including Trustor, Trustee, or Beneficiary as hereinafter defined, may purchase at such sale.

After deducting all costs, fees and expenses of whatsoever nature of Trustee and of this Trust, including cost of evidence of title in connection with sale, Trustee shall apply the proceeds of sale to payment of: all sums expended under the terms hereof, not then repaid, with accrued interest at the amount allowed by law in effect at the date hereof; all other sums then secured hereby; and the remainder, if any, to the person or persons legally entitled thereto. All expenditures and expenses of the nature in this paragraph mentioned shall become so much additional indebtedness secured hereby and immediately due and payable, with interest thereon at the highest rate permitted by law, when paid or incurred by Beneficiary or Trustee in connection with (a) any proceeding, including probate and bankruptcy proceedings, to which either of them shall be a party, either as plaintiff, claimant or defendant, by reason of this Deed or any indebtedness hereby secured; or (b) preparations for the commencement of any suit for the foreclosure hereof after accrual of such right to foreclose whether or not actually commenced; or (c) preparations for the defense of any threatened suit or proceeding which might affect the premises or the security hereof, whether or not actually commenced.

13. No action for the enforcement of the lien or of any provision hereof shall be subject to any defense which would not be good and available to the party interposing same in an action at law upon the Note.

14. Beneficiary shall have the right to inspect the premises at all reasonable times and access thereto shall be permitted

for that purpose.

15. As material consideration for the loan hereby secured, Trustor hereby waives any and all rights of redemption from sale, trustee or judicial, as provided herein.

16. Beneficiary, or any successor in ownership of any indebtedness secured hereby, may from time to time, by instrument in writing, substitute a successor or successors to any Trustee named herein or acting hereunder, which instrument, executed by the Beneficiary and duly acknowledged and recorded in the office of the recorder of the county or counties where said premises are situated, shall be conclusive proof of proper substitution of such successor Trustee or Trustees, who shall, without conveyance from the Trustee predecessor, succeed to all its title, estate, rights, powers and duties. Said instrument must contain the name of the original Trustor, Trustee and Beneficiary hereunder, the book and page where this Deed is recorded and the names and address of the new Trustee.

17. Trustee accepts this Trust when this Deed, duly executed and acknowledged, is made a public record as provided by law. Trustee is not obligated to notify any party hereto of pending sale under any other Deed of Trust or of any action or proceeding in which Trustor, Beneficiary or Trustee shall be a party unless brought by Trustee.

The undersigned Trustor requests that a copy of any Notice of Default and of any Notice of Sale hereunder be mailed to him at his address hereinbefore set forth.

18. Trustor, its successors and assigns, warrants as follows: that it is lawfully seized of the premises and has good right to sell or deed the same; that the same are free from all encumbrances and that Beneficiary has by this agreement, a valid, prior lien on said premises superior to the claim of any other person, firm or corporation.

19. This Deed applies to, inures to the benefit of, and binds all parties hereto, their heirs, legatees, devisees, administrators, executors, successors and assigns.

The term Beneficiary shall mean the owner and holder, including pledges, of the note secured hereby, whether or not named as Beneficiary herein.

IN TESTIMONY WHEREOF, the said Trustor has caused its corporate seal to be hereunto affixed and these presents to be signed by its president and attested by its secretary on the day and year first above written, pursuant to authority given by resolutions duly passed by the Board of Directors of said corporation.

Said resolutions further provide that the note herein described may be executed on behalf of said corporation by its president and secretary, and recite that the property above described constitutes less than substantially all of the assets of said corporation.

BRAND PLASTICS CO.

By J. L. McCurdy /s/  
Its President

SEAL

By R. L. Curtis /s/  
Its Secretary

STATE OF ILLINOIS

COUNTY OF Cook } ss.

On June 26, 1962 before me, the undersigned,  
a Notary Public in and for said County and State, personally appeared  
J. L. McCurdy known to me to be the President and  
R. L. Curtis known to me to be the Secretary of the corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

SEAL

Jacqueline Kutscher /s/

Notary Public in and for  
said County and State

My Commission Expires January 22, 1964



Charitable  
Mortgage

BPACC00326

## CHATTEL MORTGAGE

KNOW ALL MEN BY THESE PRESENTS, that BRAND PLASTICS CO., also known as Brand Plastics Company, a Delaware corporation (hereinafter referred to as "Mortgagor"), in consideration of the sum of Ten Dollars (\$10.00), to it paid by AMOCO CHEMICALS CORPORATION, a Delaware corporation (hereinafter referred to as "Mortgagee"), the receipt whereof is hereby acknowledged, does hereby grant, sell, convey and confirm unto Mortgagee and to its successors and assigns, the following personal property, to-wit: All chattels now or hereafter owned or acquired by Mortgagor, including (but not limited to) all such chattels which are now, or hereafter shall be, located on the following described real estate, to-wit:

PARCEL 1: The Easterly 258 feet of the westerly 467 feet of the South 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56 pages 30 and 31, of Maps, in the office of the county recorder of said county.

PARCEL 2: The Northerly 12-1/2 feet of the Easterly 258 feet of the Westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

PARCEL 3: A non-exclusive easement for the purpose of ingress and egress and for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

PARCEL 4: An easement for location and placement of underground utilities and/or sewer lines and for the purpose of laying, maintaining, operating and removing at any time a line or lines of pipe, together with the right of ingress and egress to excavate land for, construct, maintain, attend and/or remove said pipe line or lines with respect to the northerly 5 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in Book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

EXCEPT THE west 467 feet of said lot.

TO HAVE AND TO HOLD all and singular the said goods and chattels, unto the Mortgagee, and its successors and assigns, to its sole use forever.

And the Mortgagor for itself and for its successors and assigns, does hereby covenant to and with the Mortgagee, its successors and assigns, that Mortgagor is lawfully possessed of the said goods and chattels, as of its own property; that the same are free from all encumbrances and that it will, and its successors and assigns, warrant and defend the same to Mortgagee, its successors and assigns, against the lawful claims and demands of all persons.

PROVIDED, NEVERTHELESS, that if the Mortgagor, its successors and assigns, shall well and truly pay unto the Mortgagee, its successors and assigns, Two Hundred Twenty-Five Thousand Dollars (\$225,000.00), plus interest at Five and One-Fourth Percent (5-1/4%) per annum, evidenced by one (1) Promissory Note and any extension and renewal thereof of even date herewith, executed by the Mortgagor and payable to the Mortgagee, then said Mortgage is to be void, otherwise to remain in full force and effect.

AND PROVIDED, ALSO, that it shall be lawful for the Mortgagor, its successors and assigns, to retain possession of the said goods and chattels, and at its own expense, to keep and to use the same, until it or its successors and assigns shall make default in the payment of the said sum of money above specified, either in principal or interest, at the time or times and in the manner hereinabove stated. And the Mortgagor hereby covenants and agrees that in the event of non-payment of any installment of principal or interest on said Promissory Note within ten days after the same becomes due; or if the Mortgagor shall breach any of the covenants or agreements made herein and shall fail to remedy the same within ten days after written notice from Mortgagee; or it shall be found that any of the representations contained herein are false or misleading; or if the Mortgagor shall sell or assign, or attempt to sell or assign, the said goods and chattels or any interest therein; or if any writ, or any Distress Warrant shall be levied on said goods and chattels, or any part thereof, then, and in any or either of the aforesaid cases, said Note and sum of money, both principal and interest, shall, at the option of the Mortgagee, its successors and assigns, without notice of said option to anyone, become at once due and payable, and the

Mortgagee, its successors or assigns, or any of them, shall thereupon have the right to take immediate possession of said property, and for that purpose may pursue the same wherever it may be found, and may enter any of the premises of the Mortgagor with or without force or process of law, wherever the said goods and chattels may be, or be supposed to be, and search for the same, and if found, to take possession and remove and sell, and dispose of the said property or any part thereof at public auction, to the highest bidder, after giving three (3) days' notice of the time, place and terms of sale, together with a description of the property to be sold, by notices posted up in three (3) public places in the vicinity of such sale, or at private sale, with or without notice, for cash or on credit, as the Mortgagee, its successors or assigns, agents or attorneys, or any of them, may elect, and to bid and purchase at such sale; and out of the money arising from such sale, to retain all costs and charges for pursuing, searching for, taking removing keeping, storing, advertising and selling such goods and chattels, and all prior liens thereon together with the amount due and unpaid upon said Note, rendering the surplus, if any remain, unto the Mortgagor, or its legal representatives.

Except with the prior written consent of Mortgagee, Mortgagor shall do none of the following acts:

(a) Enter into any contract which is for a term in excess of two years or which commits Mortgagor to the expenditure of more than \$50,000, or make capital expenditures in excess, in the aggregate, of \$30,000 in any six month period;

(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, or enter into any lease whatsoever;

(c) Pay dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Mortgagor's net earnings, after taxes, earned subsequent to the date of this mortgage;

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness;

(e) Manufacture or sell any products other than impact and crystal polystyrene and pipe fabricated therefrom;

(f) Pay salaries and other compensation to its stockholders (including persons related to them by blood, adoption, or marriage and to firms and corporations in which any of them have a substantial interest), in excess, in the aggregate, of \$100,000 in any fiscal year;

(g) Become a guarantor of any obligations of any other person or entity;

(h) Sell any notes or accounts receivable, with or without recourse;

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity;

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business;

(k) Create or participate in the creation of any joint venture, corporation or other entity;

(l) Enter into any sale and lease-back transaction;

(m) Remove, or permit to be removed, any part of said property from the above premises.

Mortgagor shall furnish to Mortgagee within 90 days after the close of each of Mortgagor's fiscal years audited statements of a reputable public accounting firm, showing the results of Mortgagor's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

Mortgagor shall keep all personal property listed herein insured against loss or damage by fire, with extended coverage, under policies providing for payment by the insurance companies of moneys sufficient either to pay in full the indebtedness secured hereby, all in companies satisfactory to the Mortgagee, under insurance policies payable, in case of loss or damage, to Mortgagee, and shall deliver all policies, including additional and renewal policies, to Mortgagee, and in case of insurance about to expire,

shall deliver renewal policies not less than ten (10) days prior to the respective dates of expiration.

IN TESTIMONY WHEREOF, the said Mortgagor has caused its corporate seal to be hereunto affixed and these presents to be signed by its president and its secretary this 26th day of June, 1962, pursuant to authority given by resolutions duly passed by the Board of Directors of said corporation.

BRAND PLASTICS CO.

By J. L. McCurdy /s/  
Its President

SEAL

By R. L. Curtis /s/  
Its Secretary

STATE OF ILLINOIS

COUNTY OF Cook } ss.

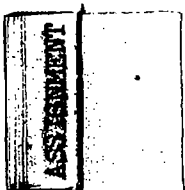
On June 26, 1962 before me, the undersigned, a Notary Public in and for said County and State, personally appeared  
J. L. McCurdy known to me to be the President, and  
R. L. Curtis known to me to be the Secretary of the corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

WITNESS my hand and official seal.

SEAL

Jacqueline Kutscher /s/  
Notary Public in and  
for said County and State

My Commission Expires January 22, 1964



ASSIGNMENT

THIS AGREEMENT, made this 19<sup>th</sup> day of January, 1961 between STANDARD OIL COMPANY, an Indiana corporation (herein called "Standard"), AMOCO CHEMICALS CORPORATION, a Delaware corporation (herein called "Amoco"), BRAND PLASTICS COMPANY, a Delaware corporation (herein called "Brand"), J. L. MCGURDY, Northridge, California (herein called "McGurdy"), and R. L. CURTIS, Arcadia, California (herein called "Curtis"),

W I T N E S S E T H T H A T:

WHEREAS, the parties hereto have executed a Construction Loan Agreement dated January 4, 1961 (hereinafter called the "Agreement"), and

WHEREAS, McGurdy and Curtis have executed and delivered the agreements, stock certificates and stock powers called for by Section 9 of the Agreement, and

WHEREAS, Standard desires to assign to Amoco, and Amoco desires to acquire and assume, all Standard's rights and obligations under the Agreement, and

WHEREAS, Brand, McGurdy and Curtis are agreeable to such an assignment and assumption,

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth and of the sum of \$10 paid by Standard to Brand, McGurdy and Curtis, receipt of which is hereby acknowledged, it is agreed as follows:

1. Standard hereby assigns and transfers to Amoco all its rights under the Agreement and the agreements executed and delivered pursuant to Section 9 of the Agreement, except that Section 3 of the Agreement and paragraph 1 of the Indemnification and Guaranty Agreement executed and delivered pursuant to Section 9 of the Agreement shall continue to be for the benefit of both Standard and Amoco.



2. Standard hereby delegates to Amoco the performance of, and Amoco hereby assumes and agrees to discharge, all Standard's duties and obligations arising under the Agreement.

3. Standard is hereby discharged from all duties and obligations which it might otherwise have in respect of the Agreement, and the Agreement shall be construed as if the name "Amoco" appeared wherever the name "Standard" presently appears in the Agreement and in the agreements executed and delivered pursuant to Section 9 of the Agreement, except insofar as Standard is named as a signatory to the Agreement and as Standard is named in Section 3 of the Agreement and paragraph 1 of the Indemnification and Guaranty Agreement executed and delivered pursuant to Section 9 of the Agreement.

WITNESS the due execution hereof by the parties hereto this 19th day of January, 1961.

STANDARD OIL COMPANY,  
an Indiana corporation

s/ ELL

By Robert C. Gussess  
Executive Vice President

ATTEST:

s/ Earl W. Russell  
Assistant Secretary

(Seal)

AMOCO CHEMICALS CORPORATION,  
a Delaware corporation

s/ ELL

By Gay H. Forester  
President

ATTEST:

s/ B. L. Brown  
Secretary

(Seal)

BRAND PLASTICS COMPANY,  
a Delaware corporation

By J. L. McCurdy  
President

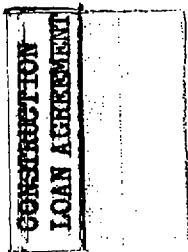
ATTEST:

s/ B. L. Curtis  
Secretary

(Seal)

s/ J. L. McCurdy  
J. L. McCurdy

s/ B. L. Curtis  
B. L. Curtis



CONSTRUCTION LOAN AGREEMENT

THIS AGREEMENT, made this 4th day of ~~December~~<sup>January, 1961,</sup>, 1960, between STANDARD OIL COMPANY, an Indiana corporation (herein called "Standard"), AMOCO CHEMICALS CORPORATION, a Delaware corporation (herein called "Amoco"), BRAND PLASTICS COMPANY, a Delaware corporation (herein called "Brand"), J. L. McCURDY, Northridge, California (herein called "McCurdy"), and R. L. CURTIS, Arcadia, California (herein called "Curtis"),

W I T N E S S E T H   T H A T:

WHEREAS, the parties hereto are also parties to a certain Loan and Supply Agreement dated November 1, 1960, which provides, among other things, that Brand shall construct a plant (hereinafter called the "Plant") for the manufacture of polystyrene and that Standard shall lend to or procure for Brand a loan of funds for such purpose, and in connection with such loan said Loan and Supply Agreement contemplates the execution of this Agreement and of instruments in the form attached hereto as exhibits, and

WHEREAS, Brand has since selected a site (hereinafter called the "Real Estate") in Cook County, Illinois, upon which to construct the Plant and intends to purchase the Real Estate and to enter into one or more contracts with contractors to be selected by it for the erection of the Plant on the Real Estate, and

WHEREAS, Brand desires to borrow from Standard amounts not exceeding in the aggregate \$750,000, approximately \$550,000 of which shall be used for the purchase of the Real Estate and the construction of the Plant and be made available by Standard in installments during the progress of construction, and approximately \$200,000 of which shall be used for working capital and made available following the construction of the Plant,

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth and for other good and valuable considerations, it is agreed as follows:

1. Loan Commitment. Standard, subject to all the terms of this Agreement, agrees to lend to Brand from time to time as requested by Brand, amounts not exceeding, in the aggregate, \$750,000 as follows:

(a) At any time prior to the date of completion of the Plant, sums aggregating approximately \$550,000, provided that such sums shall in no event exceed the aggregate amount then and theretofore payable for the Real Estate and for necessary work done and materials furnished to Brand in connection with the construction of the Plant.

(b) At any time after the date of completion of the Plant and prior to July 1, 1964, sums to be used by Brand as working capital and aggregating approximately \$200,000, provided that such sums shall in no event exceed \$750,000 less the sums loaned under subsection (a) above.

The borrowings hereunder shall be evidenced by Brand's note (hereinafter called the "Note") substantially in the form attached hereto as Exhibit A. The Note shall evidence only the actual indebtedness of Brand to Standard under this Agreement, and in the event Brand borrows less than \$750,000 hereunder, the principal installments of \$75,000 each required by the Note to be paid on each January 1 and July 1, commencing January 1, 1965, shall be proportionately reduced.

Upon the death of either McCurdy or Curtis, the additional sums, if any, which Standard then remains obligated to lend under subsections (a) and/or (b) above shall, in each case, be divided in half. If both McCurdy and Curtis die, then upon the death of the second of them to die, all obligation of Standard to lend any additional sums to Brand pursuant to this Agreement shall terminate.

2. Prepayments. If either McCurdy or Curtis dies, then within ten days after Brand's receipt of the proceeds of the insurance (referred to in Section 4(d) below) on the life of the deceased, Brand shall be required to prepay, without premium, one-half of the principal indebtedness of Brand to Standard then outstanding hereunder, together with accrued and unpaid interest thereon. Upon such prepayment, the remaining indebtedness of Brand to Standard hereunder shall be payable in equal

principal installments on the terms contained in the Note. If both McCurdy and Curtis die, then within ten days after Brand's receipt of the proceeds of the insurance (referred to in Section 4(d) below) on the life of the second of them to die, Brand shall be required to prepay, without premium, all the indebtedness of Brand to Standard then outstanding hereunder, together with accrued and unpaid interest thereon.

At any time after January 1, 1965, Brand may, at its option and without notice to Standard, prepay all or any part of the indebtedness of Brand to Standard hereunder, without premium.

3. Representations. Brand, McCurdy and Curtis, jointly and severally, represent and warrant to Standard and Amoco, as follows:

(a) Brand is a corporation duly organized and existing in good standing under the laws of the State of Delaware and is qualified to do business in the State of Illinois as a foreign corporation and is in good standing under the laws of such State;

(b) Brand has an authorized capital of 500 shares of common stock, \$100 par value per share, all of which have been issued to McCurdy and Curtis for an aggregate consideration of \$50,000 in cash, and which are fully-paid and non-assessable;

(c) Brand has issued and delivered to McCurdy and Curtis certificates representing their aforementioned shares of common stock of Brand, and such certificates contain substantially the legend required by Section 2(a) of the aforementioned Loan and Supply Agreement;

(d) The construction and operation of the Plant and the manufacture and sale of polystyrene therefrom will not constitute a breach of any contract or of any fiduciary obligation on the part of Brand, McCurdy or Curtis, and will not infringe or interfere with any proprietary rights in patents, patent applications, inventions, discoveries, processes, formulae, trade secrets, know-how or other rights, common law or statutory, held by any third persons or corporations;

(e) All necessary corporate action has been taken to authorize the purchase of the Real Estate, the construction of the Plant,

and the execution and delivery of this Agreement, and the instruments contemplated hereby;

(f) The total cost of construction of the Plant shall not exceed approximately \$550,000.

The foregoing representations shall survive the date of the making of each loan hereunder.

4. Affirmative Covenants. Brand covenants and agrees as follows:

(a) Brand shall keep, within the State of Illinois, correct and complete books and records of account and minutes of the proceedings of its stockholders and board of directors. Standard shall have the right to examine, by agent or attorney, at any reasonable time, said books and records of account and minutes. Standard shall also have the right to inspect the Plant at any reasonable time.

(b) Brand shall furnish to Standard, within 90 days after the close of each of Brand's fiscal years, audited statements of a reputable public accounting firm, showing the results of Brand's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

(c) Brand shall cause its President to furnish to Standard on or about June 1, 1961, and each June 1 thereafter, a certificate stating that Brand has not violated any of the conditions or covenants contained herein and that Brand is not otherwise in default hereunder.

(d) Brand shall maintain insurance on the lives of McCurdy and Curtis with Brand as sole beneficiary, in form satisfactory to Standard, and in an amount as to each of them equal to three-fourths of the current unpaid balance of the indebtedness of Brand to Standard hereunder. The beneficiary of such insurance shall not be changed without the prior written consent of Standard.

(e) Brand shall use its best efforts to cause the construction of the Plant (hereinafter called the "Work") to be completed and in

operation or ready for operation as a going concern not later than June 30, 1961.

(f) Brand will cause Workmen's Compensation Insurance to be carried covering all liability of Brand under Workmen's Compensation Laws, and Brand will maintain Public Liability Insurance in such amounts and in such companies as Standard may approve.

(g) In entering into any contract covering the work to be done or the materials to be furnished, Brand will use its best efforts to obtain a covenant and stipulation waiving, on the part of the contractor therein and all subcontractors, the right to have, file or maintain mechanics' liens against the premises described in the real estate and chattel mortgages referred to below, or any part thereof, and Brand will file such contract in accordance with the requirements of law in such case made and provided.

5. Negative Covenants. Until all indebtedness of Brand to Standard shall have been paid in full, Brand will not, except with the prior written consent of Standard:

(a) Enter into any contract (other than this Agreement) which is for a term in excess of two years or which commits Brand to the expenditure of more than \$50,000, or make capital expenditures (except pursuant to this Agreement) in excess, in the aggregate, of \$30,000 in any six-month period.

(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, except as contemplated by this Agreement, or enter into any lease whatsoever.

(c) Pay any dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Brand's net earnings, after taxes, earned subsequent to the date of this Agreement.

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness, except pursuant to this Agreement.

(e) Manufacture or sell any products other than impact and

crystal polystyrene.

(f) Pay salaries and other compensation to McCurdy and Curtis (including persons related to them by blood, adoption, or marriage and to firms and corporations in which either of them has a substantial interest) in excess, in the aggregate, of \$100,000 in any fiscal year.

(g) Become a guarantor of any obligations of any other person or entity.

(h) Sell any notes or accounts receivable, with or without recourse.

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity.

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business.

(k) Create or participate in the creation of any joint venture, corporation or other entity.

(l) Enter into any sale and lease-back transaction, except as provided in Section 8(a) below.

6. Defaults. The occurrence of any of the following events will constitute a default by Brand hereunder, and thereupon all obligation on the part of Standard to make loans hereunder shall, at its option, cease, and all indebtedness of Brand hereunder shall, at Standard's option, become immediately due and payable, without presentation, demand, protest or notice of any kind:

(a) Non-payment of any installment of principal or interest within ten days after the same becomes due to Standard.

(b) A breach by Brand of any other provision contained herein which is not remedied within ten days after written notice from Standard or a default under the real estate mortgage or chattel mortgage contemplated hereby.



(c) Any representation or warranty of Brand herein contained is materially false or misleading.

(d) Brand (i) files a petition in bankruptcy or for the approval of a plan of reorganization or arrangement under the Bankruptcy Act (as it now exists or may hereafter be amended), or an admission seeking the relief therein provided; (ii) is unable, or admits in writing its inability, to pay its debts as they become due; (iii) makes an assignment for the benefit of creditors; (iv) consents to the appointment of a receiver for all or a substantial part of its property; (v) fails to have vacated or set aside within thirty days of its entry any order of a court appointing without its consent a receiver or trustee for all or a substantial part of its property; (vi) is adjudicated a bankrupt; or (vii) becomes insolvent, however otherwise evidenced.

(e) The Plant encroaches on property other than the Real Estate, if such encroachment is not cured or otherwise authorized.

(f) The Work shall be found to be in violation of any law or municipal ordinance and Brand shall be unable to cure such violation within a reasonable time.

7. Powers of Standard. Should the Work be delayed or suspended for a period in excess of thirty days without cause satisfactory to Standard, or should Brand fail to cause the Work to be prosecuted vigorously with such force of workmen and such materials as shall be satisfactory to Standard at any time during the progress of the Work, Standard may and is hereby authorized, at its option, upon three days written notice to Brand, to proceed with the Work through such contractors as Standard may select, and the cost and charges of so doing shall for all purposes be considered loans made by Standard to Brand under this Agreement and they shall be secured as provided herein. For the purpose herein authorized Standard and any contractors authorized or employed by it are hereby irrevocably authorized and empowered to enter into and upon the Real Estate and Plant and take charge thereof, together with all the materials and appliances, and to proceed with the Work, or to call

upon and require any and all contractors to complete the Work according to existing contracts, with such changes, alterations, additions or modifications as may be deemed necessary or expedient by Standard, and to do whatsoever in the sole judgment of Standard it shall deem necessary to be done to secure the completion of the Work.

8. Conditions.

(a) At the time of the making of the initial loan hereunder for the purchase of the Real Estate, each of the following conditions shall have been fulfilled:

(i) Brand shall acquire an unencumbered fee simple title to the Real Estate, insurable (as evidenced by preliminary title reports of Chicago Title and Trust Company dated not earlier than fifteen days prior to the making of the loan hereunder) by policies of title insurance containing not more than the following permitted exceptions: (A) standard exceptions, and (B) exceptions for minor imperfections in title that are not substantial and do not materially impair the use thereof for the purposes contemplated by this Agreement;

(ii) Brand shall execute and deliver to Standard the Note in the principal amount of \$750,000, secured by a real estate mortgage and a chattel mortgage (substantially in the forms attached hereto as Exhibits B and C) on the Real Estate, the Plant, and the personal property to be contained therein;

(iii) Brand shall furnish to Standard such other documents and instruments as counsel for Standard shall reasonably require.

It is understood that immediately upon acquisition of the Real Estate, Brand may desire to enter into a sale-and-lease back transaction in respect of the Real Estate. Such transaction shall be subject to the prior written approval by Standard of the terms on which such transaction shall be effected. If Standard's approval is obtained, appropriate modification shall be made in the forms of the instruments to be executed and delivered pursuant hereto.

(b) After the making of the initial loan hereunder for the purchase of the Real Estate, and prior to the making of any additional loans, each of the following conditions shall be fulfilled:

(i) Said real estate and chattel mortgages shall be recorded in the office of the Recorder of Deeds of Cook County, Illinois;

(ii) Standard shall be furnished with a mortgage policy of Chicago Title and Trust Company, showing that said real estate mortgage is a valid and enforceable first lien, subject only to current taxes and zoning laws (none of which will interfere with the construction and operation of the Plant);

(iii) Brand shall furnish Standard with a complete copy of the plans and specifications for the Plant and copies of all building permits and licenses required by law, as and when issued;

(iv) Brand shall furnish to Standard such other documents and instruments as counsel for Standard shall reasonably require.

(c) At the time of the making of each loan hereunder, each of the following conditions shall be fulfilled:

(i) Brand shall not be in default hereunder, and, at Standard's option, the President of Brand shall furnish Standard with a certificate to such effect;

(ii) If requested by Standard, Brand shall furnish to Standard, a certificate of a person or firm, acceptable to Standard, estimating the cost of completion of the Work, with reasonable supporting detail, and stating that the amounts to be subsequently loaned hereunder shall be sufficient to pay the cost of such completion, free of all liens;

(iii) The guaranty obligations of McCurdy and Curtis, referred to in Section 9 below, shall be in full force and effect;

(iv) Brand shall furnish to Standard such other documents and instruments as counsel for Standard shall reasonably require.

9. Obligations of McCurdy and Curtis. McCurdy and Curtis hereby agree to execute and deliver, simultaneously herewith, indemnification, guaranty, and pledge agreements in the forms attached hereto as Exhibits D and E.

10. Waivers. No delay or omission of Standard to exercise any right or power hereunder or under the Note shall impair such right or power to be construed to be a waiver of any default or an acquiescence therein, and any single or partial exercise of any such right or power shall not preclude other or further exercise thereof or the exercise of any other right, and no waiver whatsoever shall be valid unless in writing signed by Standard, and then only to the extent in such writing specifically set forth. All remedies herein or by law afforded shall be cumulative and all shall be available to Standard until it has been paid in full in lawful money.

11. Assignment. Brand shall not assign or transfer any of its right or obligations hereunder without the prior written consent of Standard. Standard may exercise all powers and authority granted to it under this Agreement without any liability on its part.

WITNESS the due execution hereof by the parties hereto on the date first above written.

STANDARD OIL COMPANY,  
an Indiana corporation

ATTEST:

By /s/ Robert C. Gunness /s/ ELG  
Executive Vice President

/s/ Earl W. Russell  
Assistant Secretary

(SEAL)

AMOCO CHEMICALS CORPORATION,  
a Delaware corporation

ATTEST:

By /s/ Jay H. Forrester /s/ EWJ  
President

/s/ R. L. Brown  
Secretary

(SEAL)

BRAND PLASTICS COMPANY  
a Delaware corporation

ATTEST:

By /s/ J. L. McCurdy  
President

/s/ R. L. Curtis  
Secretary  
(SEAL)

/s/ J. L. McCurdy  
J. L. McCurdy

/s/ R. L. Curtis  
R. L. Curtis

EXHIBIT A

BRAND PLASTICS COMPANY  
5-1/4% INSTALLMENT NOTE

Chicago, Illinois

\$750,000

, 196\_

FOR VALUE RECEIVED, the undersigned, BRAND PLASTICS COMPANY, a Delaware corporation (hereinafter called the Company), hereby promises to pay to the order of STANDARD OIL COMPANY, an Indiana corporation, the principal sum of Seven Hundred Fifty Thousand Dollars (\$750,000), payable in 10 installments of \$75,000 each on each January 1 and July 1, commencing January 1, 1965.

Interest shall accrue on the unpaid principal of this Note at the rate of 5-1/4% per annum from the date hereof, until the principal on this Note shall be fully paid. Such interest shall become due and payable on each January 1 and July 1, commencing January 1, 1963.

Payments of both principal and interest are to be made at 910 South Michigan Avenue, Chicago, Illinois, or at such other place as the holder hereof shall from time to time designate to the undersigned, in lawful money of the United States of America.

This Note is issued pursuant to a Construction Loan Agreement dated December \_\_\_\_, 1960, between the Company, Standard Oil Company, an Indiana corporation, Amoco Chemicals Corporation, a Delaware corporation, J. L. McCurdy and R. L. Curtis, to which Agreement reference is made for a statement of the terms and conditions under which the loan evidenced hereby was made and is to be repaid and under which the due date of this Note may be accelerated.

This Note is secured by, and is subject to the terms of, mortgages of even date herewith to the Payee on real estate, and on the chattels located thereon, in the County of Cook, State of Illinois.

BRAND PLASTICS COMPANY

By

\_\_\_\_\_  
Its President

BPACC00347

EXHIBIT B

REAL ESTATE MORTGAGE

THIS MORTGAGE, Made this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, between BRAND PLASTICS COMPANY, a corporation organized under the laws of the State of Delaware, herein referred to as "Mortgagor", and STANDARD OIL COMPANY, an Indiana corporation, herein referred to as "Mortgagee", witnesseth:

THAT, WHEREAS the Mortgagor is justly indebted to the Mortgagee in the principal sum of Seven Hundred Fifty Thousand Dollars (\$750,000), evidenced by a principal note (herein called the "Note") of the Mortgagor of even date herewith, made payable to the Mortgagee, said principal being payable in ten installments of \$75,000 each on each January 1 and July 1 commencing January 1, 1965; and interest being payable on the unpaid principal balance on the Note at the rate of 5-1/4% per annum on each January 1 and July 1 commencing on January 1, 1963; and all of said principal and interest being made payable at such place as the Mortgagee may, from time to time, in writing appoint, and in the absence of such appointment, then at its office at 910 South Michigan Avenue, Chicago, Illinois.

NOW, THEREFORE, the Mortgagor to secure the payment of the said principal sum of money and said interest in accordance with the terms, provisions and limitations hereof, and the performance of the covenants and agreements herein contained, by the Mortgagor to be performed, and also in consideration of the sum of One Dollar (\$1.00) in hand paid, the receipt whereof is hereby acknowledged, does by these presents CONVEY and WARRANT unto the Mortgagee, its successors and assigns, the following described Real Estate and all of its estate, right, title and interest therein, being all that part of the East One-Half (E1/2) of Section Thirty-two (32), Township Thirty-eight (38) North, Range Twelve (12) East of the Third Principal Meridian, Lyons Township, Cook County, Illinois, more particularly described as follows:

Beginning at the center of said Section 32 thence South along the North and South center line of said Section 32 a distance of 14.03 feet to the center line of Wentworth Avenue, Village of Willow Springs, Illinois, thence Southeasterly at an angle of 39°45'30" from the North and South center line of said Section 32 a distance of 606.44 feet to a point which is 50 feet Southeasterly of measured at right angles from the Southeasterly line of the 150-foot joint fee strip described in Documents numbered 13840023 and 13840024 in the records of said Cook County, Illinois; thence Northeasterly at an angle of 71°41'30" from the center line of said Wentworth Avenue on a line 50 feet Southeasterly of normally distant from and parallel to the Southeasterly line of said joint fee strip a distance of 1297.47 feet to the true point of beginning; thence continuing Northeasterly along the last described course a distance of 339.54 feet, thence Southeasterly at right angles to the last described course a distance of 600.37 feet to a point which is 150 feet Northwesterly of measured at right angles from the Westward Main Track of The Atchison, Topeka and Santa Fe Railway Company; thence Southwesterly along a line 150 feet Northwesterly of normally distant from and parallel to said Westward Main Track a distance of 429.24 feet; thence Northeasterly at right angles to the last described course a distance of 539.90 feet to the true point of beginning containing 5.00 acres of land more or less.

which, with the property hereinafter described, is referred to herein as the "premises,"

TOGETHER with all improvements, tenements, easements, fixtures, and appurtenances thereto belonging, and all rents, issues and profits thereof for so long and during all such times as Mortgagor may be entitled thereto (which are pledged primarily and on a parity with said real estate and not secondarily), and all apparatus, equipment or articles now or hereafter therein or thereon used to supply heat, gas, air conditioning, water, light, power, refrigeration (whether single units or centrally controlled), and ventilation. All of the foregoing are declared to be a part of said real estate whether physically attached thereto or not, and it is agreed that all similar apparatus, equipment or articles hereafter placed in the premises by the Mortgagor or its successors or assigns, shall be considered as constituting part of the real estate.

TO HAVE AND TO HOLD the premises unto the said Mortgagee, its successors and assigns, forever, for the purposes, and upon the uses and trusts herein set forth.

IT IS FURTHER UNDERSTOOD AND AGREED THAT:

1. Mortgagor shall (1) promptly repair, restore or rebuild any buildings or improvements now or hereafter on the premises which may become damaged or be destroyed; (2) keep said premises in good condition and repair, without waste, and free from mechanic's or other liens or claims for lien not expressly subordinated to the lien hereof; (3) pay when due any indebtedness which may be secured by a lien or charge on the premises superior to the lien hereof, and upon request exhibit satisfactory evidence of the discharge of such prior lien to the Mortgagee; (4) complete within a reasonable time any building or buildings now or at any time in process of erection upon said premises; (5) comply with all requirements of law or municipal ordinances with respect to the premises and the use thereof; (6) make no material alterations in said premises except as required by law or municipal ordinance.

2. Mortgagor shall pay before any penalty attaches all general taxes, and shall pay special taxes, special assessments, water charges, sewer service charges, and other charges against the premises when due, and shall, upon written request, furnish to the Mortgagee duplicate receipts therefor. To prevent default hereunder Mortgagor shall pay in full under protest, in the manner provided by statute, any tax or assessment which Mortgagor may desire to contest.

3. Mortgagor shall furnish to the Mortgagee within 90 days after the close of each of Mortgagor's fiscal years audited statements of a reputable public accounting firm, showing the results of Mortgagor's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

4. Mortgagor shall do none of the following acts without the written approval of the Mortgagee:

(a) Enter into any contract which is for a term in excess of 2 years or which commits Mortgagor to the expenditure of more than \$50,000, or make capital expenditures in excess, in the aggregate, of \$30,000 in any six-month period;



(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, or enter into any lease whatsoever;

(c) Pay dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Mortgagor's net earnings, after taxes, earned subsequent to the date of this mortgage;

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness;

(e) Manufacture or sell any products other than impact and crystal polystyrene;

(f) Pay salaries and other compensation to its stockholders (including persons related to them by blood, adoption, or marriage and to firms and corporations in which any of them have a substantial interest) in excess, in the aggregate, of \$100,000 in any fiscal year;

(g) Become a guarantor of any obligations of any other person or entity;

(h) Sell any notes or accounts receivable, with or without recourse;

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity;

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business;

(k) Create or participate in the creation of any joint venture, corporation or other entity;

(l) Enter into any sale and lease-back transaction.

5. Mortgagor shall maintain insurance on the lives of J. L. McCurdy and R. L. Curtis, its sole stockholders, with Mortgagor as sole beneficiary, in form satisfactory to Mortgagee and in an amount as to each of them equal to 3/4ths of the current unpaid balance of the Note. The beneficiary under the insurance policies shall not be changed without the prior written consent of Mortgagee.

6. Mortgagor shall keep all buildings and improvements now or hereafter situated on said premises insured against loss or damage by fire, with extended coverage, under policies providing for payment by the insurance companies of moneys sufficient either to pay the cost of replacing or repairing the same or to pay in full the indebtedness secured hereby, all in companies satisfactory to the Mortgagee, under insurance policies payable in case of loss or damage to Mortgagee, such rights to be evidenced by the standard mortgage clause to be attached to each policy, and shall deliver all policies, including additional and renewal policies, to Mortgagee, and in case of insurance about to expire, shall deliver renewal policies not less than ten days prior to the respective dates of expiration.

7. In case of default therein, Mortgagee may, but need not, make any payment or perform any act hereinbefore required of Mortgagor in any form and manner deemed expedient, and may, but need not, make full or partial payments of principal or interest on prior encumbrances, if any, and purchase, discharge, compromise or settle any tax lien or other prior lien or title or claim thereof, or redeem from any tax sale or forfeiture affecting said premises or contest any tax or assessment. All moneys paid for any of the purposes herein authorized and all expenses paid or incurred in connection therewith, including attorneys' fees, and any other moneys advanced by Mortgagee to protect the mortgaged premises and the lien hereof, shall be so much additional indebtedness secured hereby and shall become immediately due and payable

without notice and with interest thereon at the rate of seven per cent per annum. Inaction of Mortgagee shall never be considered as a waiver of any right accruing to it on account of any default hereunder on the part of Mortgagor.

8. Mortgagee in making any payment hereby authorized relating to taxes or assessments, may do so according to any bill, statement or estimate procured from the appropriate public office without inquiry into the accuracy of such bill, statement or estimate or into the validity of any tax, assessment, sale, forfeiture, tax lien or title or claim thereof.

9. Mortgagor shall pay each item of indebtedness herein mentioned, both principal and interest, when due according to the terms hereof. At the option of Mortgagee, and without notice to Mortgagor, all unpaid indebtedness secured by this mortgage shall, notwithstanding anything in the Note or in the mortgage to the contrary, become due and payable in the event of (a) non-payment of any installment of principal or interest on the Note within ten days after the same becomes due, or (b) the breach of any other agreement of the Mortgagor herein contained which is not remedied within ten days after written notice from Mortgagee.

10. When the indebtedness hereby secured shall become due, whether by acceleration or otherwise, Mortgagee shall have the right to foreclose the lien hereof by judicial proceedings, or, if permitted by law, to sell said premises and convey the same to the purchaser in fee simple in accordance with the statute, if any. In any suit to foreclose the lien hereof, there shall be allowed and included as additional indebtedness in the decree for sale all expenditures and expenses which may be paid or incurred by or on behalf of Mortgagee for attorneys' fees, appraiser's fees, outlays for documentary and expert evidence, stenographers' charges, publication costs and costs (which may be estimated as to items to be expended after entry of the decree) of procuring all such abstracts of title, title searches and examinations, guarantee policies, Torrens certificates, and similar data and assurances with respect to title as Mortgagee may deem to be reasonably necessary either to prosecute such suit or to evidence to bidders at any sale which may be had pursuant to such decree the true condition of the title to or the value of the premises. All expenditures and expenses of the nature in this paragraph mentioned shall become so much additional indebtedness secured hereby and immediately due and payable, with interest thereon at the highest rate permitted by law, when paid or incurred by Mortgagee in connection with (a) any proceeding, including probate and bankruptcy proceedings, to which either of them shall be a party, either as plaintiff, claimant or defendant, by reason of this mortgage or any indebtedness hereby secured; or (b) preparations for the commencement of any suit for the foreclosure hereof after accrual of such right to foreclose whether or not actually commenced; or (c) preparations for the defense of any threatened suit or proceeding which might affect the premises or the security hereof, whether or not actually commenced.

11. The proceeds of any foreclosure sale of the premises shall be distributed and applied in the following order of priority: First, on account of all costs and expenses incident to the foreclosure proceedings, including all such items as are mentioned in the preceding paragraph hereof; second, all other items which under the terms hereof constitute secured indebtedness additional to that evidenced by the Note, with interest thereon as herein provided; third, all principal and interest remaining unpaid on the Note; fourth, any overplus to Mortgagor, its successors or assigns, as their rights may appear.

12. Upon, or at any time after the filing of a bill to foreclose this mortgage, the court in which such bill is filed may appoint a receiver of said premises. Such appointment may be made either before or after sale, without notice, without regard to the solvency or insolvency of Mortgagor at the time of application for such receiver and without regard to the then value of the premises or whether the same shall be then occupied as a homestead or not and the Mortgagee hereunder may be appointed as such receiver. Such receiver shall have power to collect the rents, issues and profits of said premises during the pendency of such foreclosure suit and, in case of a sale and a deficiency, during the full statutory period of redemption, whether there be redemption or not, as well as during any further times when Mortgagor, except for the intervention of such receiver, would be entitled to collect such rents, issues and profits, and all other powers which may be necessary or are usual in such cases for the protection, possession, control, management and operation of the premises during the whole of said period. The Court from time to time may authorize the receiver to apply the net income in his hands in payment in whole or in part of: (1) The indebtedness secured hereby, or by any decree foreclosing this mortgage, or any tax, special assessment or other lien which may be or become superior to the lien hereof or of such decree, provided such application is made prior to foreclosure sale; (2) the deficiency in case of a sale and deficiency.

13. No action for the enforcement of the lien or of any provision hereof shall be subject to any defense which would not be good and available to the party interposing same in an action at law upon the Note.

14. Mortgagee shall have the right to inspect the premises at all reasonable times and access thereto shall be permitted for that purpose.

15. Mortgagor hereby waives any and all rights of redemption from sale under any order or decree of foreclosure of this mortgage, on its own behalf and on behalf of each and every person, except decree or judgment creditors of Mortgagor, acquiring any interest in or title to the premises subsequent to the date hereof.

16. Mortgagor, its successors and assigns, warrants as follows: that it is lawfully seized of the premises and has good right to sell or mortgage the same; that the same are free from all encumbrances and that Mortgagee has by this agreement, a valid, prior lien on said premises superior to the claims of any other person, firm or corporation.

IN TESTIMONY WHEREOF, the said Mortgagor has caused its corporate seal to be hereunto affixed and these presents to be signed by its \_\_\_\_\_ president and attested by its \_\_\_\_\_ secretary on the day and year first above written, pursuant to authority given by resolutions duly passed by the Board of Directors of said corporation.

Said resolutions further provide that the Note herein described may be executed on behalf of said corporation by its President.

BRAND PLASTICS COMPANY

By: \_\_\_\_\_  
President.

Attest:

\_\_\_\_\_  
Secretary.

STATE OF ILLINOIS }  
COUNTY OF \_\_\_\_\_ } SS.

I, \_\_\_\_\_ a Notary Public, in and  
for said County, in the State aforesaid, DO HEREBY CERTIFY that  
\_\_\_\_\_  
President of the  
Brand Plastics Company, and \_\_\_\_\_  
Secretary of said Company, personally known to me to be the  
same persons whose names are subscribed to the foregoing instru-  
ment as such \_\_\_\_\_ President and \_\_\_\_\_ Secretary, re-  
spectively, appeared before me this day in person and acknowledged  
that they signed and delivered the said instrument as their own  
free and voluntary act and as the free and voluntary act of said  
Company, for the uses and purposes therein set forth; and the  
said \_\_\_\_\_ Secretary then and there acknowledged that  
as custodian of the corporate seal of said Company, did affix the  
corporate seal of said Company to said instrument as \_\_\_\_\_ own  
free and voluntary act and as the free and voluntary act of said  
Company, for the uses and purposes therein set forth.

GIVEN under my hand and notarial seal, this \_\_\_\_\_  
day of \_\_\_\_\_

\_\_\_\_\_  
A.D. 19\_\_\_\_

\_\_\_\_\_  
Notary Public.

EXHIBIT C

CHATTEL MORTGAGE

KNOW ALL MEN BY THESE PRESENTS, That BRAND PLASTICS COMPANY, a Delaware corporation (hereinafter referred to as "Mortgagor"), in consideration of the sum of Ten Dollars (\$10.00), to it paid by STANDARD OIL COMPANY, an Indiana corporation (hereinafter referred to as "Mortgagee"), the receipt whereof is hereby acknowledged, does hereby grant, sell, convey and confirm unto Mortgagee and to its successors and assigns, the following personal property, to-wit: All chattels now or hereafter owned or acquired by Mortgagor, including (but not limited to) all such chattels which are now, or hereafter shall be, located on the following described real estate, to-wit:

All that part of the East One-Half (E-1/2) of Section Thirty-two (32), Township Thirty-eight (38) North, Range Twelve (12) East of the Third Principal Meridian, Lyons Township, Cook County, Illinois, more particularly described as follows:

Beginning at the center of said Section 32 thence South along the North and South center line of said Section 32 a distance of 14.03 feet to the center line of Wentworth Avenue, Village of Willow Springs, Illinois, thence Southeasterly at an angle of  $39^{\circ}45'30''$  from the North and South center line of said Section 32 a distance of 606.44 feet to a point which is 50 feet Southeasterly of measured at right angles from the Southeasterly line of the 150-foot joint fee strip described in Documents numbered 13840023 and 13840024 in the records of said Cook County, Illinois; thence Northeasterly at an angle of  $71^{\circ}41'30''$  from the center line of said Wentworth Avenue on a line 50 feet Southeasterly of normally distant from and parallel to the Southeasterly line of said joint fee strip a distance of 1297.47 feet to the true point of beginning; thence continuing Northeasterly along the last described course a distance of 339.54 feet, thence Southeasterly at right angles to the last described course a distance of 600.37 feet to a point which is 150 feet Northwesterly of measured at right angles from the Westward Main Track of The Atchison, Topeka and Santa Fe Railway Company; thence Southwesterly along a line 150 feet Northwesterly of normally distant from and parallel to said Westward Main Track a distance of 429.24 feet; thence Northeasterly at right angles to the last described course a distance of 539.90 feet to the true point of beginning containing 5.00 acres of land more or less.

TO HAVE AND TO HOLD all and singular the said goods and chattels, unto the Mortgagee, and its successors and assigns, to its sole use forever. And the Mortgagor for itself and for its successors and assigns, does hereby covenant to and with the Mortgagee, its successors and assigns, that Mortgagor is lawfully possessed of the said goods and chattels, as of its own property; that the same are free from all encumbrances and that it will, and its successors and assigns, warrant and defend the same to Mortgagee, its successors and assigns, against the lawful claims and demands of all persons.

PROVIDED, NEVERTHELESS, That if the Mortgagor, its successors and assigns, shall well and truly pay unto the Mortgagee, its successors and assigns, Seven Hundred Fifty Thousand Dollars (\$750,000), plus interest at Five and One-Fourth Percent (5-1/4%) per annum, evidenced by one (1) Promissory Note of even date herewith, executed by the Mortgagor and payable to the Mortgagee, then said Mortgage is to be void, otherwise to remain in full force and effect.

AND PROVIDED, ALSO, That it shall be lawful for the Mortgagor, its successors and assigns, to retain possession of the said goods and chattels, and at its own expense, to keep and to use the same, until it or its successors and assigns shall make default in the payment of the said sum of money above specified, either in principal or interest, at the time or times and in the manner hereinabove stated. And the Mortgagor hereby covenants and agrees that in the event of non-payment of any installment of principal or interest on said Promissory Note within ten days after the same becomes due; or if the Mortgagor shall breach any of the covenants or agreements made herein and shall fail to remedy the same within ten days after written notice from Mortgagee; or it shall be found that any of the representations contained herein are false or misleading; or

if the Mortgagor shall sell or assign, or attempt to sell or assign, the said goods and chattels or any interest therein; or if any writ, or any Distress Warrant shall be levied on said goods and chattels, or any part thereof, then, and in any or either of the aforesaid cases, said Note and sum of money, both principal and interest, shall, at the option of the Mortgagee, its successors and assigns, without notice of said option to anyone, become at once due and payable, and the Mortgagee, its successors or assigns, or any of them shall thereupon have the right to take immediate possession of said property, and for that purpose may pursue the same wherever it may be found, and may enter any of the premises of the Mortgagor with or without force or process of law, wherever the said goods and chattels may be, or be supposed to be, and search for the same, and if found, to take possession and remove and sell, and dispose of the said property or any part thereof at public auction, to the highest bidder, after giving three (3) days' notice of the time, place and terms of sale, together with a description of the property to be sold, by notices posted up in three (3) public places in the vicinity of such sale, or at private sale, with or without notice, for cash or on credit, as the Mortgagee, its successors or assigns, agents or attorneys, or any of them, may elect, and to bid and purchase at such sale; and out of the money arising from such sale, to retain all costs and charges for pursuing, searching for, taking, removing, keeping, storing, advertising and selling such goods and chattels, and all prior liens thereon together with the amount due and unpaid upon said Note, rendering the surplus, if any remain, unto the Mortgagor, or its legal representatives.

Except with the prior written consent of Mortgagee, Mortgagor shall do none of the following acts:

- (a) Enter into any contract which is for a term in excess of 2 years of which commits Mortgagor to

the expenditure of more than \$50,000, or make capital expenditures in excess, in the aggregate, of \$30,000 in any six-month period;

(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, or enter into any lease whatsoever;

(c) Pay dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Mortgagor's net earnings, after taxes, earned subsequent to the date of this mortgage;

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness;

(e) Manufacture or sell any products other than impact and crystal polystyrene;

(f) Pay salaries and other compensation to its stockholders (including persons related to them by blood, adoption, or marriage and to firms and corporations in which any of them have a substantial interest), in excess, in the aggregate, of \$100,000 in any fiscal year;

(g) Become a guarantor of any obligations of any other person or entity;

(h) Sell any notes or accounts receivable, with or without recourse;

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity;

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business;

(k) Create or participate in the creation of any joint venture, corporation or other entity;



(1) Enter into any sale and lease-back transaction.

Mortgagor shall furnish to Mortgagee within 90 days after the close of each of Mortgagor's fiscal years audited statements of a reputable public accounting firm, showing the results of Mortgagor's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

Mortgagor shall maintain insurance on the lives of J. L. McCurdy and R. L. Curtis, its sole stockholders, with Mortgagor as sole beneficiary, in form satisfactory to Mortgagee, and in an amount as to each of them equal to 3/4ths of the current unpaid balance of the note secured hereby. The beneficiary under the insurance policies shall not be changed without the prior written consent of Mortgagee.

Mortgagor shall keep all personal property listed herein insured against loss or damage by fire, with extended coverage, under policies providing for payment by the insurance companies of moneys sufficient either to pay the cost of replacing or repairing the same or to pay in full the indebtedness secured hereby, all in companies satisfactory to the Mortgagee, under insurance policies payable, in case of loss or damage, to Mortgagee, and shall deliver all policies, including additional and renewal policies, to Mortgagee, and in case of insurance about to expire, shall deliver renewal policies not less than Ten (10) days prior to the respective dates of expiration.

WITNESS the due execution hereof by the duly authorized officers of BRAND PLASTICS COMPANY on its behalf this \_\_\_\_\_ day of \_\_\_\_\_, 196\_\_.

BRAND PLASTICS COMPANY

By \_\_\_\_\_ President

ATTEST:

\_\_\_\_\_  
Secretary

STATE OF ILLINOIS

COUNTY OF \_\_\_\_\_

} SS.

I, \_\_\_\_\_, a Notary Public in and for said County in the State aforesaid, do hereby certify that \_\_\_\_\_ and \_\_\_\_\_, personally known to me to be the same persons whose names are subscribed to the foregoing instrument as President and Secretary, respectively, of BRAND PLASTICS COMPANY appeared before me this day in person and acknowledged that they signed, sealed with the corporate seal of said corporation, and delivered the said instrument as their own free and voluntary act, and as the free and voluntary act of said corporation, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal, this \_\_\_\_\_ day of \_\_\_\_\_, 196\_\_.

My Commission expires \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

EXHIBIT D

INDEMNIFICATION AND GUARANTY AGREEMENT

Pursuant to the Construction Loan Agreement, a copy of which is hereto attached, and to which reference is made for definitions of the parties referred to herein, we, the undersigned, hereby agree, jointly and severally, as follows:

1. We shall indemnify Standard, Amoco and Brand against all claims, damages and litigation expenses (except expenses of suits or actions in which a judgment or decree is entered favorable in all respects to Standard, Amoco and Brand, which judgment or decree, if appealed from, is affirmed) arising out of any claim of any of the matters represented and warranted against in Section 3(d) of said Construction Loan Agreement.

2. We hereby guarantee the full and prompt payment at maturity and at all times thereafter of any and all indebtedness of Brand incurred pursuant to said Construction Loan Agreement, and every balance and part thereof, whether now owing or due, with interest at the rate of 7% per annum from maturity until paid; and we also agree, jointly and severally, to pay in addition thereto, all costs, expenses and reasonable attorney's fees at any time paid or incurred in endeavoring to collect said indebtedness, or any part thereof, and in and about enforcing this instrument.

This guaranty shall be a continuing, absolute and unconditional guaranty, and shall remain in full force and effect until the principal and interest on said indebtedness shall be fully paid or until such earlier date on which Standard or Amoco shall acquire all Brand's outstanding stock.

To further secure the payment of the indebtedness hereby guaranteed, we hereby authorize irrevocably any attorney of any court of record to enter our appearance in such court, waive

service of process and confess judgment against us in favor of the legal holder of said indebtedness for such amount as may appear unpaid thereon, together with costs of suit and reasonable attorney's fees, hereby ratifying and confirming all that said attorney may do by virtue hereof.

This guaranty shall be binding upon us, our heirs, legal representatives and assigns.

IN WITNESS WHEREOF, we have hereunto subscribed this  
day of \_\_\_\_\_, 196\_\_.

\_\_\_\_\_  
J. L. McGurdy

\_\_\_\_\_  
R. L. Curtis

EXHIBIT E

PLEDGE AGREEMENT

Pursuant to the Construction Loan Agreement, a copy of which is hereto attached, and to which reference is made for definitions of the parties referred to herein, and in order to secure the payment of the loans to be made pursuant to said Agreement, we, the undersigned, hereby transfer, pledge and deliver to Standard, as collateral security for the payment of said indebtedness, certificates representing all the outstanding shares of Common Stock of Brand, together with appropriate executed instruments of transfer. Upon the occurrence of any default under said Agreement, Standard may, in its discretion, sell, assign and deliver said collateral or any part thereof, upon five (5) days' notice to us, and at such sale Standard may become the purchaser of said collateral, or any part thereof; and after deducting all legal or other costs and expenses, including reasonable attorney's fees, from the proceeds of such sale or sales, Standard shall apply the remainder to the payment of the loans secured hereby, returning the surplus, if any, to us, in accordance with our respective interests, and in case the proceeds of said sale shall not cover the principal, interest and expenses of said loans, we agree to pay the deficiency forthwith after such sale with legal interest. Every right, power and discretion herein granted to Standard shall extend and apply to and be to the benefit of any transferee, assignee or legal holder of the notes evidencing said loans; and Standard may deliver said collateral, or any part thereof, to any transferee or assignee, and Standard shall thereafter be discharged from all risk of loss thereof and from any responsibility whatsoever.

Neither of us shall sell, transfer, or otherwise dispose

of any of the shares of common stock of Brand pledged hereby without the written approval of Standard.

All collateral security delivered hereunder shall be returned to us, in accordance with our respective interests, upon the full payment of said loans.

IN WITNESS WHEREOF, we have hereunto subscribed  
this \_\_\_\_\_ day of \_\_\_\_\_, 196\_.

\_\_\_\_\_  
J. L. McCurdy

\_\_\_\_\_  
R. L. Curtis

PLEDGE  
AGREEMENT

## PLEDGE AGREEMENT

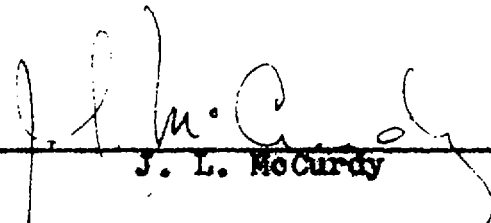
Pursuant to the Construction Loan Agreement, a copy of which is hereto attached, and to which reference is made for definitions of the parties referred to herein, and in order to secure the payment of the loans to be made pursuant to said Agreement, we, the undersigned, hereby transfer, pledge and deliver to Standard, as collateral security for the payment of said indebtedness, 500 shares of Common Stock of Brand, represented by Certificate No. 1 for 250 shares and Certificate No. 2 for 250 shares, and constituting all the outstanding shares of Common Stock of Brand, together with appropriate executed instruments of transfer. Upon the occurrence of any default under said Agreement, Standard may, in its discretion, sell, assign and deliver said collateral or any part thereof, upon ten (10) days' notice to us, and at such sale Standard may become the purchaser of said collateral, or any part thereof; and after deducting all legal or other costs and expenses, including reasonable attorney's fees, from the proceeds of such sale or sales, Standard shall apply the remainder to the payment of the loans secured hereby, returning the surplus, if any, to us, in accordance with our respective interests, and in case the proceeds of said sale shall not cover the principal, interest and expenses of said loans, we agree to pay the deficiency forthwith after such sale with legal interest. Every right, power and discretion herein granted to Standard shall extend and apply to and be to the benefit of any transferee, assignee or legal holder of the notes evidencing said loans; and Standard may deliver said collateral, or any part thereof, to any transferee or assignee, and Standard shall thereafter be discharged from all risk of loss thereof and from any responsibility whatsoever.




the legal holder of said indebtedness for such amount as may appear unpaid thereon, together with costs of suit and reasonable attorney's fees, hereby ratifying and confirming all that said attorney may do by virtue hereof.

This guaranty shall be binding upon us, our heirs, legal representatives and assigns.

IN WITNESS WHEREOF, we have hereunto subscribed this 7th day of January, 1961.

  
\_\_\_\_\_  
J. L. McCurdy

  
\_\_\_\_\_  
R. L. Curtis

## INDEMNIFICATION AND GUARANTY AGREEMENT

Pursuant to the Construction Loan Agreement, a copy of which is hereto attached, and to which reference is made for definitions of the parties referred to herein, we, the undersigned, hereby agree, jointly and severally, as follows:

1. We shall indemnify Standard, Amoco, and Brand against all claims, damages and litigation expenses (except expenses of suits or actions in which a judgment or decree is entered favorable in all respects to Standard, Amoco and Brand, which judgment or decree, if appealed from, is affirmed) arising out of any claim of any of the matters represented and warranted against in Section 3(d) of said Construction Loan Agreement.

2. We hereby guarantee the full and prompt payment at maturity and at all times thereafter of any and all indebtedness of Brand incurred pursuant to said Construction Loan Agreement, and every balance and part thereof, whether now owing or due, with interest at the rate of 7% per annum from maturity until paid; and we also agree, jointly and severally, to pay in addition thereto, all costs, expenses and reasonable attorney's fees at any time paid or incurred in endeavoring to collect said indebtedness, or any part thereof, and in and about enforcing this instrument.

This guaranty shall be a continuing, absolute and unconditional guaranty, and shall remain in full force and effect until the principal and interest on said indebtedness shall be fully paid or until such earlier date on which Standard or Amoco shall acquire all Brand's outstanding stock.

To further secure the payment of the indebtedness hereby guaranteed, we hereby authorize irrevocably any attorney of any court of record to enter our appearance in such court, waive service of process and confess judgment against us in favor of

During the term of this pledge and so long as Brand is not in default under said Agreement, we shall be entitled (a) to receive any and all dividends and other amounts which may be paid in respect of the pledged shares, and (b) to vote such shares at all meetings of Brand's stockholders.

Neither of us shall sell, transfer, or otherwise dispose of any of the shares of Common Stock of Brand pledged hereby without the written approval of Standard.

All collateral security delivered hereunder shall be returned to us, in accordance with our respective interests, upon the full payment of said loans.

IN WITNESS WHEREOF, we have hereunto subscribed this 7th day of January, 1961.

  
\_\_\_\_\_  
J. L. McCurdy

  
\_\_\_\_\_  
R. L. Curtis

AGREE IN RESPECT OF  
INVENTIONS & IMPROVEMENTS

**AGREEMENT IN RESPECT OF  
INVENTIONS AND IMPROVEMENTS**

In consideration of the sum of One Dollar (\$1.00), receipt of which is hereby acknowledged, and other good and valuable considerations, John L. McCurdy, a shareholder of Brand Plastics Company, a Delaware corporation, hereby covenants and agrees as follows:

(1) In respect to every invention, improvement, product, process, apparatus, formula or design that said John L. McCurdy, individually or jointly, during the term that he remains a shareholder of Brand Plastics Company, may invent, discover, conceive or originate relating to polystyrene and the business of Brand Plastics Company, including the development, manufacture, preparation, handling, treatment or use of any products produced by Brand Plastics Company, the said John L. McCurdy

(a) Will promptly fully disclose same to Brand Plastics Company and will not disclose same to any other party without the consent of Brand Plastics Company,

(b) Does hereby assign same and all United States and foreign patents that may be issued thereon to Brand Plastics Company,

(c) Will, but without expense to himself, fully cooperate with Brand Plastics Company in applying for and securing in the name of Brand Plastics Company or its nominee, patent or patents on the same in each country in the world in which Brand Plastics Company may desire to secure patent protection and will promptly execute all proper documents presented to him for signature by Brand Plastics Company to enable Brand Plastics Company or its nominee to secure such patent protection and to transfer legal title therein, together with any patents that may be issued thereon, to Brand Plastics Company or its nominee,

(d) Will, but without expense to himself, assist Brand Plastics Company in all proper ways in the conduct of any interference proceeding or litigation in which the priority or originality of invention respecting any of said inventions or the validity of patents granted thereon shall be involved or concerned.

(2) This agreement shall inure to the benefit of Brand Plastics Company, its successors and assigns, and be binding on the said John L. McCurdy, his heirs, legal representatives and assigns.

/s/ John L. McCurdy  
JOHN L. MCCURDY

DATE:

STATE OF                    }  
COUNTY OF                } ss.

On the 15th day of November, 1960,  
before me, a Notary Public in and for the County and  
State aforesaid, appeared John L. McCurdy to me person-  
ally known to be the same person whose name is subscribed  
to the foregoing instrument, and acknowledged that he  
executed said instrument as his free and voluntary act,  
and for the uses and purposes therein contained.

/s/ Jane Wisniewski  
**Notary Public**

My Commission Expires on May 15, 1964  
(SEAL)

**AGREEMENT IN RESPECT OF  
INVENTIONS AND IMPROVEMENTS**

In consideration of the sum of One Dollar (\$1.00), receipt of which is hereby acknowledged, and other good and valuable considerations, Robert L. Curtis, a shareholder of Brand Plastics Company, a Delaware corporation, hereby covenants and agrees as follows:

(1) In respect to every invention, improvement, product, process, apparatus, formula or design that said Robert L. Curtis, individually or jointly, during the term that he remains a shareholder of Brand Plastics Company, may invent, discover, conceive or originate relating to polystyrene and the business of Brand Plastics Company, including the development, manufacture, preparation, handling, treatment or use of any products produced by Brand Plastics Company, the said Robert L. Curtis

(a) will promptly fully disclose same to Brand Plastics Company and will not disclose same to any other party without the consent of Brand Plastics Company,

(b) Does hereby assign same and all United States and foreign patents that may be issued thereon to Brand Plastics Company,



(c) Will, but without expense to himself, fully cooperate with Brand Plastics Company in applying for and securing in the name of Brand Plastics Company or its nominee, patent or patents on the same in each country in the world in which Brand Plastics Company may desire to secure patent protection and will promptly execute all proper documents presented to him for signature by Brand Plastics Company to enable Brand Plastics Company or its nominee to secure such patent protection and to transfer legal title therein, together with any patents that may be issued thereon, to Brand Plastics Company or its nominee,

(d) Will, but without expense to himself, assist Brand Plastics Company in all proper ways in the conduct of any interference proceeding or litigation in which the priority or originality of invention respecting any of said inventions or the validity of patents granted thereon shall be involved or concerned.

(2) This agreement shall inure to the benefit of Brand Plastics Company, its successors and assigns, and be binding on the said Robert L. Curtis, his heirs, legal representatives and assigns.

/s/ Robert L. Curtis  
ROBERT L. CURTIS

DATE:

BOON & SUPPLY  
FURNISH & MERCH  
AGREEMENT

- 3 -

STATE OF                    }  
COUNTY OF                } ss.

On the 15th day of November, 1960,  
before me, a Notary Public in and for the County and  
State aforesaid, appeared Robert L. Curtis to me person-  
ally known to be the same person whose name is subscribed  
to the foregoing instrument, and acknowledged that he  
executed said instrument as his free and voluntary act,  
and for the uses and purposes therein contained.

/s/ Jane Wisniewski  
Notary Public

My Commission Expires on May 15, 1964  
(SEAL)

BPACC00375

Conformed

LOAN AND SUPPLY AGREEMENT

THIS AGREEMENT, made this 1st day of November, 1960, by and between J. L. McCURDY of 19118 Marilla Street, Northridge, California (hereinafter called "McCURDY"); R. L. CURTIS of 409 Woodruff Avenue, Arcadia, California (hereinafter called "CURTIS"); STANDARD OIL COMPANY, an Indiana corporation, with an office at 910 South Michigan Avenue, Chicago, Illinois (hereinafter called "STANDARD"); AMOCO CHEMICALS CORPORATION, a Delaware corporation, with an office at 910 South Michigan Avenue, Chicago, Illinois (hereinafter called "AMOCO"); and BRAND PLASTICS COMPANY, a Delaware corporation, with an office at No. 100 West Tenth Street, Wilmington, Delaware (hereinafter called "BRAND").

WITNESSETH THAT:

WHEREAS, McCurdy and Curtis have formed Brand for the purpose of constructing a plant for the manufacture and sale of approximately Twelve Million (12,000,000) pounds per year each of impact and crystal polystyrene, and

WHEREAS, McCurdy and Curtis propose to double the capacity and output of the plant as soon as feasible, using the earnings of Brand for that purpose, and

WHEREAS, McCurdy and Curtis have represented their desire to obtain financial assistance and an assured source of supplies of raw materials, and Standard is willing to furnish or to aid in obtaining such financial assistance and Amoco is willing to supply such raw materials,

THEREFORE, McCurdy, Curtis, Standard, Amoco and Brand

agree:

1. Following the formation of Brand, Standard will loan to Brand or will procure for Brand a loan of approximately SEVEN HUNDRED FIFTY THOUSAND DOLLARS (\$750,000.00); approximately FIVE HUNDRED FIFTY THOUSAND DOLLARS (\$550,000.00) of such loan shall be made available for construction of the plant in installments during the progress of construction and approximately TWO HUNDRED THOUSAND DOLLARS (\$200,000.00) of such loan shall be made available for working capital following the construction of the plant. McCurdy and Curtis will use their best efforts to have construction completed and plant operations begun by June 30, 1961. The principal amount of said loan shall be repayable in equal semi-annual installments over a five (5) year period commencing January 1, 1965, with the right of prepayment only after that date. Interest at the rate of five and one-quarter (5-1/4) per cent per year on the unpaid balance of the loan shall be payable semi-annually commencing January 1, 1963. The lender shall have the right to accelerate the maturity of the loan in the event of the failure of either Brand or of McCurdy or Curtis to comply with any of the provisions of this Agreement.

2. The obligation of Standard to grant or procure the afore-mentioned loan shall be contingent upon:

- a. Incorporation of Brand, the outstanding stock of which shall be owned solely by McCurdy and Curtis. The initial capitalization of Brand shall be FIFTY THOUSAND DOLLARS (\$50,000.00) contributed in cash by

McCurdy and Curtis. State of incorporation and the articles and by-laws of Brand shall be mutually acceptable to McCurdy, Curtis, Standard and Amoco. All stock certificates issued by Brand to McCurdy or Curtis, their respective heirs, executors, administrators or assigns, prior to December 31, 1975, shall have printed on the face thereof a legend substantially as follows:

"Transfer of the shares represented by this certificate is restricted by the provisions of an agreement between J. L. McCurdy, R. L. Curtis, Standard Oil Company, Amoco Chemicals Corporation and Brand Plastics Company, dated November 1, 1960, giving Standard Oil Company and Amoco Chemicals Corporation certain preferential purchase rights as therein described until December 31, 1975."

- b. Selection of a plant location mutually acceptable to McCurdy, Curtis, Standard and Amoco.
- c. Furnishing by McCurdy and Curtis to Standard and Amoco of a signed instrument in a form satisfactory to Standard and Amoco warranting that the construction and operation of the plant and the manufacture and sale of polystyrene therefrom will not constitute a breach

of contract or fiduciary obligation and will not infringe or interfere with any proprietary rights in patents, patent applications, inventions, discoveries, processes, formulae, trade secrets, know-how or other rights, common law or statutory, held by any third persons or corporations and indemnifying Standard, Amoco and Brand against all claims, damages or litigation expenses (except expenses of suits or actions in which a judgment or decree is entered favorable in all respects to Standard, Amoco and Brand, which judgment or decree, if appealed from, is affirmed) arising out of any claim of such breach or infringement or interference with any such rights.

3. The afore-mentioned loan shall be secured by a mortgage on all the assets of Brand, whether then possessed or later acquired, including all rights in patents, patent applications, trademarks, copyrights, inventions, discoveries, processes, formulae, trade secrets and other know-how, and McGurdy and Curtis shall each personally guarantee the repayment of said loan in full, together with interest, said guarantees to be secured by the pledge of the stock of Brand held by McGurdy and Curtis. During the period of said guarantee said stock shall be deposited with Standard, endorsed in blank or accompanied by other proper instrument of assignment, with appropriate powers of sale and disposition in Standard in the event of default. Said guarantee

will terminate on the date of any acquisition by Standard or Amoco of all the outstanding stock of Brand as herein-after provided.

4. Until December 31, 1964, and thereafter until Standard or Amoco shall acquire all of the outstanding stock of Brand or until the afore-mentioned loan shall be repaid in full, whichever shall first occur, Brand shall do none of the following acts without the written approval of Standard or Amoco:

- a. Enter into any contract binding Brand for longer than two years or committing Brand to the expenditure of over \$50,000, or enter into any lease whatsoever.
- b. Borrow any money or mortgage, pledge or encumber any corporate asset.
- c. Pay dividends out of any year's earnings in excess of 1/4 of such earnings, after paying or providing for the payment of all taxes.
- d. Make total capital expenditures in excess of \$30,000 during any six-month period.
- e. Issue additional stock or issue any bonds or other evidence of indebtedness.
- f. Manufacture or sell any products other than impact and crystal polystyrene.
- g. Pay salaries or any other form of compensa-



tion to McCurdy and Curtis which, when combined, total more than ONE HUNDRED THOUSAND DOLLARS (\$100,000.00) per year.

5. Until December 31, 1964, and thereafter until Standard or Amoco shall acquire all of the outstanding stock of Brand or until the afore-mentioned loan shall be repaid in full, whichever shall first occur:

- a. McCurdy and Curtis will use their best efforts to manage Brand and the plant in a proper manner, to promote the business and market the products thereof, and to keep products and service in all respects competitive; will devote their full time to such endeavors; and will not enter into any other employment or business arrangement without the written approval of Standard or Amoco.
- b. McCurdy and Curtis shall not dispose of, transfer or encumber the shares of Brand held by them except as otherwise provided herein, without the written approval of Standard or Amoco.
- c. Brand shall maintain insurance on the lives of McCurdy and Curtis, with Brand as beneficiary in a form satisfactory to Standard and in an amount, on the life of each, equal to three-fourths (3/4) of the current unpaid balance of the afore-mentioned loan.

Brand will also maintain extended coverage and public liability insurance in amounts and in a form satisfactory to Standard and Amoco.

d. Standard and Amoco shall have the right at all reasonable times to inspect and audit the books and records of Brand and shall have access to the plant. An annual audit of the books and records shall be made by a reputable public accounting firm, and shall be made available to Standard and Amoco.

6. At any time during the second six (6) months of 1964, Standard shall have an option to acquire, on December 31, 1964, from McGurdy and Curtis, their heirs, executors, administrators or assigns, all of the outstanding stock of Brand at a value per share equal to the original paid-in capital contribution per share plus an amount equal to two and one-half (2-1/2) times Brand's per share earnings (after provision for payment of all taxes) for any period of twelve (12) consecutive months selected by McGurdy and Curtis and terminating not later than June 30, 1964. In the event of the failure of McGurdy and Curtis to select such twelve (12) month period within 30 days after receipt of written notice from Standard of Standard's intention to acquire said shares, Standard shall have the right to designate said twelve (12) month period. If said option is exercised, said stock of Brand shall be acquired in exchange for capital stock of Standard. The exchange value per share of Standard Oil Company stock shall be the average of the daily

closing prices per share on the New York Stock Exchange for each day of November, 1964, in which such stock is traded on said exchange. The per share earnings used in computing the value per share of Brand stock shall be based on sound corporate accounting practices, regardless of whether this conflicts with accounting practices used for income tax purposes.

In the event that during the aforesaid option period Standard shall elect not to exercise the above-mentioned option and shall so notify McGurdy, Curtis and Amoco, Amoco shall thereupon have the option to acquire on December 31, 1964, from McGurdy, Curtis, their heirs, administrators, executors or assigns all of the outstanding shares of Brand for cash at a price equal to the value of such stock computed as in the preceding paragraph of this Section 6.

Between the date of the exercise by Standard or Amoco of either of the foregoing options and December 31, 1964, McGurdy and Curtis shall make available to the party exercising the option all of their technical information and know-how relating to the construction and operation of the plant and to the production and marketing of polystyrene therein and therefrom.

Standard or, in the alternative, Amoco shall each have an additional option to acquire the stock of Brand during the period January 1, 1965, through December 31, 1967, as provided in Section 7 below.

7. At any time during the period January 1, 1965, through December 31, 1967, Standard shall have the option

to acquire, on the June 30th or December 31st next following Standard's notice of election to exercise said option, from McCurdy and Curtis, their heirs, executors, administrators or assigns, in exchange for stock of Standard, all of the outstanding stock of Brand (except stock previously sold or transferred pursuant to Section 8 below) at a value per share equal to the original paid-in capital contribution per share plus an amount equal to two and one-half (2-1/2) times Brand's per share earnings (after provision for payment of all taxes) for any period of twelve (12) consecutive months selected by McCurdy and Curtis and terminating not later than six (6) months prior to the date of acquisition as above provided, and minus an amount equal to the total of all dividends per share paid prior to the date of such acquisition in excess of one-quarter (1/4) of any year's per share earnings and also minus an amount equal to the total combined salaries and other compensation of McCurdy and Curtis in excess of ONE HUNDRED THOUSAND DOLLARS (\$100,000.00) per year divided by the number of shares then outstanding. The provisions of Section 6 above relating to selection of a twelve (12) month period in the event of the failure of McCurdy and Curtis to do so, the method for determining the exchange value of Standard Oil Company stock (using closing prices during the month of either May or November, as the case may be), and the making available to Standard of technical information and know-how between the exercise date and the acquisition date, shall all apply, mutatis mutandis, in the case of the exercise of the option provided for in this Section 7.

In the event that during the option period provided in the foregoing paragraph Standard shall elect not

to exercise said option and shall so notify McGurdy, Curtis and Amoco. Amoco shall thereupon have the option to acquire such shares from McGurdy, Curtis, their heirs, administrators, executors or assigns for cash at a price equal to the value of such stock computed as in the preceding paragraph of this Section 7.

8. At any time during the period January 1, 1965, through December 31, 1975, that McGurdy, Curtis or their respective heirs, executors, administrators or assigns wishes to transfer any or all of the stock of Brand owned by such person, regardless of whether or not such person has received an offer to purchase such shares, the person so desiring to transfer said shares shall first notify Amoco in writing, stating in such notice the number of shares desired to be transferred and the price per share at which such person is willing to make such transfer. Amoco shall have the right within sixty (60) days after receipt of said notice to purchase all of the shares so offered at the price per share stated in said notice. In the event that Amoco fails to exercise said right by written notice to the person making said offer within said sixty (60) day period, the person making said offer shall have the right for a period of six (6) months after the expiration of said sixty (60) day period to transfer all, but not less than all, the shares so offered to Amoco to a third party, provided, however, that such transfer shall be for a price per share no lower than the price per share stated in the notice to Amoco. In the event that no such transfer shall be made to a third party within said six (6) month period, the right to make a transfer to

third parties shall terminate and no such transfer of any shares of Brand shall thereafter be made by the person having had such right, unless Amoco is again given notice and the procedures established by this section are repeated.

9. McCurdy and Curtis shall make an exclusive grant, assignment and transfer to Brand, as a capital contribution, of all patent rights, patent applications, inventions, discoveries, improvements, processes, formulae and know-how necessary or desirable for the manufacture, sale and use of polystyrene, or in the conduct of the business of Brand, which are conceived, developed or acquired by McCurdy and Curtis during the period that they remain shareholders of Brand, said grant, assignment, or transfer to be in a form satisfactory to Standard and Amoco, and made at such time or times as Standard and Amoco may request.

10. Until December 31, 1975, Amoco shall have the right to supply Brand's requirements of all raw materials at prices no higher than those at which Brand could obtain materials of like quality and quantity from third parties. *its total cost*

11. On reasonable advance notice to Brand, Amoco shall have the right to purchase a maximum of twenty-five (25) per cent, or some larger mutually agreeable amount, of the polystyrene manufactured each year by Brand at a price equal to the lowest price at which such product is offered for sale by Brand to any third party, or twelve (12) per cent less than the published market price, whichever is lower. This provision for the twelve (12) per cent discount shall not be construed as obligating Brand to make any sale at

such a discount to Amoco which, on the basis of the facts then existing, would, in the opinion of legal counsel mutually acceptable to all parties hereto, result in a violation of any federal or state law.

12. The interpretation and enforcement of this Agreement shall be governed by the laws of the State of Illinois.

13. No waiver by any party or parties of any default by any other party or parties under this Agreement shall operate as a waiver of any future default whether of like or different character.

14. This Agreement constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and shall supersede all previous memoranda, proposals, representations or agreements, whether oral or written, previously made or entered into between the parties hereto or any of them.

15. All notices, requests and other communications shall be deemed to have been duly given if delivered at, or if mailed by certified or registered mail, postage prepaid, in an envelope addressed to, the particular party at its address, as follows:

McCURDY:	19118 Marilla Street Northridge, California
----------	--

CURTIS:	409 Woodruff Avenue Arcadia, California
---------	--

STANDARD:	910 South Michigan Avenue Chicago 80, Illinois
-----------	---

AMOCO:	910 South Michigan Avenue Chicago 80, Illinois
--------	---

BRAND:

No. 100 West Tenth Street  
Wilmington, Delaware

Any notice, request or other communication so mailed by certified or registered mail shall be deemed to have been given to and received by the addressee forty-eight (48) hours after the same has been so mailed, excluding Saturdays, Sundays and any holidays observed by the addressee, and in the event that the same is delivered, as soon as such delivery has been made to the party's address as hereinbefore set forth. Any party may change its address by giving written notice to the other party or parties to that effect.

16. No party may assign any rights under this Agreement without first obtaining the written consent of all other parties.

IN WITNESS WHEREOF, the parties hereto have duly executed and delivered this Agreement as of the day and year first above written.

/s/ J. L. McCurdy  
J. L. McCURDY

/s/ R. L. Curtis  
R. L. CURTIS

ATTEST:

STANDARD OIL COMPANY /s/ ELG

/s/ P. C. Jensen  
ASSISTANT Secretary

By /s/ Robert C. Gunness  
Executive Vice President



- 14 -

Attest:

/s/ R. L. Brown

(SEAL)

AMOCO CHEMICALS CORPORATION /s/ ELG

By /s/ Jay H. Forrester  
President

BRAND PLASTICS COMPANY

By /s/ J. L. McCurdy  
President

Attest:

/s/ R. L. Curtis

(SEAL)

BPACC00390

SECTION	TOWNSHIP	RANGE	S. & M.
1	4S	14W	S.B.

KNOX ST.

TRACT

LOT 5

N<sub>0</sub>

467'

(P-07-145)

12.5'

(PVT.)

ST.

LOT 6

4671

627.30'

7

FEES: BRAND PLASTICS CO., A DELAWARE CORP.

ENCUMBRANCES: T.D. TO T.I. & T. CO.

SOUTHERN CALIFORNIA GAS COMPANY

PLAT ACCOMPANYING APPLICATION FOR PIPELINE RIGHT OF WAY, 12.5' IN WIDTH

IN LOS ANGELES COUNTY

SCALE 1" = 100 FT.

A.S. 351 - 359

DRWN. E.W. CHED.

DATE 8-13-62

DRG. NO. P-07-146

APPROVED:

DIVISION ENGINEER

By. o. 50729-075

1264-2-F

BPACC00391

## PLEDGE AGREEMENT


Pursuant to the Construction Loan Agreement, a copy of which is hereto attached, and to which reference is made for definitions of the parties referred to herein, and in order to secure the payment of the loans to be made pursuant to said Agreement, we, the undersigned, hereby transfer, pledge and deliver to Standard, as collateral security for the payment of said indebtedness, 500 shares of Common Stock of Brand, represented by Certificate No. 1 for 250 shares and Certificate No. 2 for 250 shares, and constituting all the outstanding shares of Common Stock of Brand, together with appropriate executed instruments of transfer. Upon the occurrence of any default under said Agreement, Standard may, in its discretion, sell, assign and deliver said collateral or any part thereof, upon ten (10) days' notice to us, and at such sale Standard may become the purchaser of said collateral, or any part thereof; and after deducting all legal or other costs and expenses, including reasonable attorney's fees, from the proceeds of such sale or sales, Standard shall apply the remainder to the payment of the loans secured hereby, returning the surplus, if any, to us, in accordance with our respective interests, and in case the proceeds of said sale shall not cover the principal, interest and expenses of said loans, we agree to pay the deficiency forthwith after such sale with legal interest. Every right, power and discretion herein granted to Standard shall extend and apply to and be to the benefit of any transferee, assignee or legal holder of the notes evidencing said loans; and Standard may deliver said collateral, or any part thereof, to any transferee or assignee, and Standard shall thereafter be discharged from all risk of loss thereof and from any responsibility whatsoever.


During the term of this pledge and so long as Brand is not in default under said Agreement, we shall be entitled (a) to receive any and all dividends and other amounts which may be paid in respect of the pledged shares, and (b) to vote such shares at all meetings of Brand's stockholders.

Neither of us shall sell, transfer, or otherwise dispose of any of the shares of Common Stock of Brand pledged hereby without the written approval of Standard.

All collateral security delivered hereunder shall be returned to us, in accordance with our respective interests, upon the full payment of said loans.

IN WITNESS WHEREOF, we have hereunto subscribed this 4<sup>th</sup> day of January, 1961.

  
\_\_\_\_\_  
J. L. McCurdy

  
\_\_\_\_\_  
R. L. Curtis

CHATTEL MORTGAGE

KNOW ALL MEN BY THESE PRESENTS, that BRAND PLASTICS CO., also known as Brand Plastics Company, a Delaware corporation (hereinafter referred to as "Mortgagor"), in consideration of the sum of Ten Dollars (\$10.00), to it paid by AMOCO CHEMICALS CORPORATION, a Delaware corporation (hereinafter referred to as "Mortgagee"), the receipt whereof is hereby acknowledged, does hereby grant, sell, convey and confirm unto Mortgagee and to its successors and assigns, the following personal property, to-wit: All chattels now or hereafter owned or acquired by Mortgagor, including (but not limited to) all such chattels which are now, or hereafter shall be, located on the following described real estate, to-wit:

PARCEL 1: The Easterly 258 feet of the westerly 467 feet of the South 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56 pages 30 and 31, of Maps, in the office of the county recorder of said county.

PARCEL 2: The Northerly 12-1/2 feet of the Easterly 258 feet of the Westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, State of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county.

RESERVING therefrom an easement for ingress and egress and for location and placement of underground utilities and/or sewer lines over that portion of Parcel 2, hereinabove described, included within the lines of Parcel 3 hereinafter described.

PARCEL 3: A non-exclusive easement for the purpose of ingress and egress and for the location and placement of underground utilities and/or sewer lines over the northerly 25 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in Book 56, pages 30 and 31 of Maps, in the office of the county recorder of said county, as created by that certain agreement dated April 17, 1962 and recorded concurrently herewith.

PARCEL 4: An easement for location and placement of underground utilities and/or sewer lines and for the purpose of laying, maintaining, operating and removing at any time a line or lines of pipe, together with the right of ingress and egress to excavate land for, construct, maintain, attend and/or remove said pipe line or lines with respect to the northerly 5 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, state of California, as per map recorded in Book 56 pages 30 and 31 of Maps, in the office of the county recorder of said county.

EXCEPT THE west 467 feet of said lot.

TO HAVE AND TO HOLD all and singular the said goods and chattels, unto the Mortgagee, and its successors and assigns, to its sole use forever.

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And the Mortgagor for itself and for its successors and assigns, does hereby covenant to and with the Mortgagee, its successors and assigns, that Mortgagor is lawfully possessed of the said goods and chattels, as of its own property; that the same are free from all encumbrances and that it will, and its successors and assigns, warrant and defend the same to Mortgagee, its successors and assigns, against the lawful claims and demands of all persons.

PROVIDED, NEVERTHELESS, that if the Mortgagor, its successors and assigns, shall well and truly pay unto the Mortgagee, its successors and assigns, Two Hundred Twenty-Five Thousand Dollars (\$225,000.00), plus interest at Five and One-Fourth Percent (5-1/4%) per annum, evidenced by one (1) Promissory Note and any extension and renewal thereof of even date herewith, executed by the Mortgagor and payable to the Mortgagee, then said Mortgage is to be void, otherwise to remain in full force and effect.

AND PROVIDED, ALSO, that it shall be lawful for the Mortgagor, its successors and assigns, to retain possession of the said goods and chattels, and at its own expense, to keep and to use the same, until it or its successors and assigns shall make default in the payment of the said sum of money above specified, either in principal or interest, at the time or times and in the manner hereinabove stated. And the Mortgagor hereby covenants and agrees that in the event of non-payment of any installment of principal or interest on said Promissory Note within ten days after the same becomes due; or if the Mortgagor shall breach any of the covenants or agreements made herein and shall fail to remedy the same within ten days after written notice from Mortgagee; or it shall be found that any of the representations contained herein are false or misleading; or if the Mortgagor shall sell or assign, or attempt to sell or assign, the said goods and chattels or any interest therein; or if any writ, or any Distress Warrant shall be levied on said goods and chattels, or any part thereof, then, and in any or either of the aforesaid cases, said Note and sum of money, both principal and interest, shall, at the option of the Mortgagee, its successors and assigns, without notice of said option to anyone, become at once due and payable, and the

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Mortgagee, its successors or assigns, or any of them, shall thereupon have the right to take immediate possession of said property, and for that purpose may pursue the same wherever it may be found, and may enter any of the premises of the Mortgagor with or without force or process of law, wherever the said goods and chattels may be, or be supposed to be, and search for the same, and if found, to take possession and remove and sell, and dispose of the said property or any part thereof at public auction, to the highest bidder, after giving three (3) days' notice of the time, place and terms of sale, together with a description of the property to be sold, by notices posted up in three (3) public places in the vicinity of such sale, or at private sale, with or without notice, for cash or on credit, as the Mortgagee, its successors or assigns, agents or attorneys, or any of them, may elect, and to bid and purchase at such sale; and out of the money arising from such sale, to retain all costs and charges for pursuing, searching for, taking removing keeping, storing, advertising and selling such goods and chattels, and all prior liens thereon together with the amount due and unpaid upon said Note, rendering the surplus, if any remain, unto the Mortgagor, or its legal representatives.

Except with the prior written consent of Mortgagee, Mortgagor shall do none of the following acts:

(a) Enter into any contract which is for a term in excess of two years or which commits Mortgagor to the expenditure of more than \$50,000, or make capital expenditures in excess, in the aggregate, of \$30,000 in any six month period;

(b) Borrow any money, or mortgage, pledge, or encumber any of its assets, or enter into any lease whatsoever;

(c) Pay dividends, or make any other distribution in respect of its stock, except out of 25% of the remainder of Mortgagor's net earnings, after taxes, earned subsequent to the date of this mortgage;

(d) Purchase, redeem or otherwise acquire or retire any of its stock or issue additional stock of any class or issue any bonds or other evidences of indebtedness;

478110345 51

(e) Manufacture or sell any products other than impact and crystal polystyrene and pipe fabricated therefrom;

(f) Pay salaries and other compensation to its stockholders (including persons related to them by blood, adoption, or marriage and to firms and corporations in which any of them have a substantial interest), in excess, in the aggregate, of \$100,000 in any fiscal year;

(g) Become a guarantor of any obligations of any other person or entity;

(h) Sell any notes or accounts receivable, with or without recourse;

(i) Make or permit to exist any loans or advances to or any investments in any other person or entity;

(j) Merge or consolidate with or into any other entity or lease or sell all, or substantially all, of its property, assets and business to any other entity, or dispose of or sell any substantial portion of its assets, property or business except in the ordinary course of business;

(k) Create or participate in the creation of any joint venture, corporation or other entity;

(l) Enter into any sale and lease-back transaction;

(m) Remove, or permit to be removed, any part of said property from the above premises.

Mortgagor shall furnish to Mortgagee within 90 days after the close of each of Mortgagor's fiscal years audited statements of a reputable public accounting firm, showing the results of Mortgagor's operations for the preceding fiscal year and its financial condition as at the end of such fiscal year.

Mortgagor shall keep all personal property listed herein insured against loss or damage by fire, with extended coverage, under policies providing for payment by the insurance companies of moneys sufficient either to pay in full the indebtedness secured hereby, all in companies satisfactory to the Mortgagee, under insurance policies payable, in case of loss or damage, to Mortgagee, and shall deliver all policies, including additional and renewal policies, to Mortgagee, and in case of insurance about to expire,

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shall deliver renewal policies not less than ten (10) days prior to the respective dates of expiration.

IN TESTIMONY WHEREOF, the said Mortgagor has caused its corporate seal to be hereunto affixed and these presents to be signed by its president and its secretary this 26th day of June, 1962, pursuant to authority given by resolutions duly passed by the Board of Directors of said corporation.

BRAND PLASTICS CO.

By

J. L. McCandless  
Its President

By

R. L. Cantelero  
Its Secretary

STATE OF ILLINOIS

COUNTY OF Carle

} ss.

On June 26, 1962 before me, the undersigned, a Notary Public in and for said County and State, personally appeared

J. L. McCandless known to me to be the President, and

R. L. Cantelero known to me to be the Secretary of

the corporation that executed the within instrument, known to me to be the persons who executed the within Instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

WITNESS my hand and official seal.

J. J. K. Fisher  
Notary Public in and  
for said County and State

MY COMMISSION EXPIRES JANUARY 22, 1964

COPY FOR YOUR FILE

## INDEMNITY AGREEMENT

EXECUTED IN DUPLICATE

THIS AGREEMENT, made and entered into this 26th day of June, 1962  
by

BRAND PLASTICS CO., a corporation,  
~~XXXXXXXXXXXX~~  
~~XXXXXXXXXXXX~~  
GERALD F. BRAME, INC., a corporation,

as first party, and TITLE INSURANCE AND TRUST COMPANY, a corporation, as second party,

WITNESSETH:

WHEREAS, first party ~~has an interest in~~ <sup>has an interest in</sup> the real property in the county of Los Angeles, state of California, described as follows:

Parcel 1: The easterly 258 feet of the westerly 467 feet of the south 3 acres of Lot 5 of Tract No. 4671, in the county of Los Angeles, as per map recorded in Book 56 Pages 30 and 31 of Maps, in the office of the county recorder of said county.

Parcel 2: The northerly 12-1/2 feet of the easterly 258 feet of the westerly 467 feet of Lot 6 of Tract No. 4671, as per map recorded in Book 56 Pages 30 and 31 of Maps, in the office of the county recorder of said county;

and

WHEREAS, first party has commenced or is about to commence certain works of improvement on said land; and

WHEREAS, first party represents that all costs for such work of improvement will be paid prior to the expiration of the time for filing claims of liens arising out of such work of improvement; and

WHEREAS, first party has requested second party to issue, from time to time, its policy or policies of title insurance insuring the title to said land without showing in such policy or policies the possibility that mechanics' liens arising out of such work of improvement may be filed against said land, and/or insuring against loss by reason of any such mechanics' lien or liens, which may gain priority over the lien of an insured deed of trust or mortgage;

NOW, THEREFORE, in consideration of the issuance by the second party of such policy or policies of title insurance as it may be willing to issue in the manner requested, first party hereby agrees to hold and save second party harmless against all damages, costs and charges which second party may sustain in consequence of its having issued such policy or policies of title insurance as requested, including all costs and expenses incurred in the enforcement of this agreement.

The first party agrees to file a notice of completion covering such work of improvement as provided by law.

~~instructed Amaco Chemicals Corp. that out of the funds accruing to~~

~~XXXXXXXXXXXX~~  
~~XXXXXXXXXXXX~~  
The first party has deposited with second party ~~the sum of \$20,000.00~~ <sup>the sum of \$20,000.00</sup> to be held in trust for the first party the sum of \$20,000.00 shall be disbursed only on the order of second party.

BPACC00399



Conformed

# AMOCO CHEMICALS CORPORATION

130 EAST RANDOLPH DRIVE

CHICAGO 1, ILLINOIS



Chicago, Illinois.

January 2, 19 63

## CONTRACT

BETWEEN

AMOCO CHEMICALS CORPORATION hereinafter called Seller

and

BRAND PLASTICS COMPANY

8400 Willow Springs Road

Willow Springs, Illinois

hereinafter called Buyer.

Seller agrees to sell and Buyer to buy the following material under the conditions herein specified.

PERIOD: From: January 1, 1963 To: January 1, 1964

MATERIAL QUANTITY and QUALITY: Styrene Monomer - Technical Grade (specifications attached hereto); total requirements at all plants.

PRICE: 10.46 cents per pound, tank cars, f.o.b. Seller's works, freight equalized with nearest competitive producing point, (maximum freight charge of 0.20 cents per pound), and subject to escalation as per Rider 1 attached hereto.

TERMS: Net 30 days following receipt of invoice.

### SHIPMENTS and CONTAINERS:

Unless otherwise specified herein, all tank car shipments shall be made in Seller's equipment. Buyer agrees to unload and return promptly all tank cars and to pay any demurrage accruing thereon at the place of delivery. Returnable containers shall remain the property of Seller but Buyer shall pay a deposit fee per container to be determined from time to time by Seller conditioned upon Buyer's returning such container, freight prepaid, within ninety (90) days from the date of invoice in good condition and not having been used to hold other materials. If any returnable container is not so returned within said ninety (90) day period, the deposit fee shall be retained by Seller to reimburse it for loss of said container and title thereto shall thereupon vest in Buyer.

### DELIVERIES:

Buyer shall give Seller reasonable notice covering shipments and Seller shall not be required to deliver in any month more than monthly quantity specified, or if no monthly quantity is specified, more than the pro rata amount of the maximum quantity provided for. In the event of failure of Buyer to take stipulated or minimum pro rata quantity in any month, such deliveries or parts thereof may, at Seller's option, be cancelled. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

### CONDITIONS:

The conditions on the reverse side hereof form a part of this contract.

SIGNED:

SIGNED:

BPACC00401

AMOCO CHEMICALS CORPORATION

By

Title

By

Title

## CONDITIONS

1. The price(s) herein specified may be revised for any quarterly period commencing on the first day of January, April, July and October of the year hereof (including the first such quarterly period) by written notice from Seller, dispatched not less than fifteen (15) days prior to the date on which any such quarterly period is to commence. In the absence of such written notice from the Seller to the Buyer regarding any contemplated adjustment of price(s) for the ensuing quarter, it is understood that the price then in effect shall continue in effect for the next quarter. Buyer's failure to serve Seller with written notice of proposed price revision prior to the beginning of any quarterly period shall be considered acceptance of such revision. If Buyer gives notice of non-acceptance of a proposed price increase and Buyer and Seller fail to agree on a new price increase prior to the beginning of the quarterly period in which such price increase is to take effect, Seller shall no longer be obligated to deliver and Buyer shall no longer be obligated to purchase the material(s) covered hereunder.

### quantity and

2. If Buyer is offered material of equal quality at a price lower than stated herein and furnishes satisfactory evidence of such lower price offer, the Seller will either meet such price or allow Buyer to purchase said material so offered, the amount so purchased to be deducted from the quantity specified herein.

3. If, in Seller's judgment, Buyer's credit shall become impaired at any time, Seller shall forthwith have the right to decline to make deliveries hereunder except for cash until such time as said credit has been re-established to Seller's satisfaction, and Seller may at any time revise the stated credit terms whenever it deems such action advisable to protect its interest.

4. Any tax or other Governmental charge upon the sale and/or shipment of the material(s) herein specified now imposed by Federal, State or Local authorities, or hereafter becoming effective within the life of this contract, shall be added to the price herein provided and shall be paid by Buyer.

5. Each delivery shall stand as a separate contract and the failure of any delivery shall not affect any other deliveries.

6. The term "f.o.b. Buyer's works" or "delivered" when used in this contract means deliveries f.o.b. railway cars at carrier's nearest delivery point or at railway siding designated by Buyer, when via rail, and f.o.b. Buyer's plant, when via automotive truck, and Buyer agrees to furnish and maintain safe and adequate facilities in all respects meeting all requirements of any applicable governmental law, rule or regulation, for receiving deliveries of and storing any products delivered hereunder, and Buyer hereby releases Seller from any liability for, and agrees to indemnify Seller on account of, any claims for injury to or death of persons or damage to property in anywise resulting from or based upon the unloading and storage of said products.

7. As to material(s) to be delivered f.o.b. Seller's plant, title shall pass to the Buyer, and Buyer shall become the sole owner and take possession of such products when the same are loaded into cars or other conveyances at point of origin. Unless Seller specifically agrees herein to pay all or some part thereof, Buyer will pay the freight or other delivery charges, inspection fees, if any, and all other charges levied or imposed on such products after the loading is completed. If the Seller shall prepay such charges on Buyer's request or for Buyer, Buyer will reimburse Seller therefor.

8. Seller's or railroad's weights (or Seller's measurements in case of material sold by volume) taken at shipping points, as stated in invoice, shall control unless proved to be in error.

9. The Seller warrants that the goods furnished hereunder shall be of the quality and specifications stated herein. However, Buyer assumes all risk whatsoever as to the result of the use of the material(s) purchased, whether used singly or in combination with other substances. No claim of any kind, whether as to materials delivered or for non-delivery of material(s), shall be greater in amount than the purchase price of the material(s), in respect of which such damages are claimed; and failure to give notice of claim within sixty (60) days from date of delivery, or the date fixed for delivery, respectively, shall constitute a waiver by Buyer of all claims of any kind arising as a result of such delivery or of non-delivery.

10. If the manufacture, <sup>thirty (3)</sup> transportation, delivery or receipt by either party of any of the material(s) covered hereby is prevented, restricted or interfered with by reason of fire, explosion, breakdown of plant, strike, lockout, labor dispute, casualty or accident, lack or failure of transportation facilities, epidemic, cyclone, flood, drought, lack or failure of sources of supply of labor, raw materials, power or supplies, or, if the material covered hereby is not manufactured by Seller, then lack or failure of sources of supply of said material, or war, revolution, civil commotion, acts of public enemies, blockade or embargo, or any law, order, proclamation, regulation, ordinance, demand or requirement of any government or of any subdivision, authority or representative of any such government, or any other cause whatsoever, whether similar or dissimilar to those above enumerated, beyond the reasonable control of the party, the party so affected shall be excused from making or taking deliveries hereunder to the extent of such prevention, restriction or interference. If by reason of any of the foregoing events or of national emergency, the quantities of the material(s) covered hereby, or of any materials used in the production thereof, reasonably available to Seller shall be less than its total needs for its own use and for sale, Seller may allocate its available supply of any such material(s) to any one or more of its purchasers or of its own departments and divisions, on any basis it may deem proper, without thereby incurring liability for failure to perform this contract.

11. This contract is not assignable by Buyer except with written consent of Seller.

12. This contract contains the entire understanding between Buyer and Seller for the purchase and sale of the material(s) described herein and there are no warranties of any kind, either express or implied, other than as expressly set forth herein. This contract shall not be modified by acceptance by Seller of any purchase order issued by Buyer and containing terms or conditions inconsistent herewith.

13. This contract shall not be binding upon Seller until it is signed by an officer or authorized representative of Seller in its principal office at Chicago, Illinois.

14. If any provision hereof is, or becomes, violative of any law, or rule, order or regulation issued thereunder, Seller shall have the right, upon notice to Buyer, to cancel such provision, without effect upon the other provisions, or to cancel further deliveries in their entirety.

RIDER 1

TO STYRENE MONOMER CONTRACT DATED JANUARY 2, 1963

BETWEEN

AMOCO CHEMICALS CORPORATION (SELLER)

AND

BRAND PLASTICS COMPANY (BUYER)

The base price of styrene sold hereunder shall be 10.46 cents per pound, tanks, freight equalized, as long as the posted price of nitration benzene published for Houston, Texas, in the "Oil, Paint and Drug Reporter" (OPDR) remains at 25.0 cents per gallon, tanks, works. For each 1.0 cent per gallon increase or decrease in said benzene price from 25.0 cents per gallon, the base styrene price shall be increased or decreased, as the case may be, by 0.10 cent per pound.

In the event that the "Oil, Paint and Drug Reporter" should change the basis for reporting or should cease to report the price of benzene, the parties shall agree upon a suitable basis for the escalation of the base price. The nitration benzene price as last published shall be used until a substitute factor has been agreed upon or determined.

Price shall be figured in cents per pound to the nearest one-hundredth of one cent by Seller.

BPACC00403



# DATA SHEET

AMOCO CHEMICALS CORPORATION

130 East Randolph Drive • Chicago 1, Illinois

## STYRENE MONOMER

### TECHNICAL GRADE SPECIFICATIONS

<u>Purity</u> (Crystallizing Point Method) % by weight, minimum	99.2
<u>Color</u> Saybolt Scale, minimum APHA Platinum-Cobalt Scale, maximum	23 20
<u>Sulfur</u> (As Sulfur) % by weight, maximum	0.005
<u>Polymer</u> % by weight, maximum Solubility in benzene	0.005 Complete
<u>Peroxides</u> (As Hydrogen Peroxide) % by weight, maximum	0.01
<u>Aldehydes</u> (As Benzaldehyde) % by weight, maximum	0.03
<u>Chlorides</u> (As Chlorine) % by weight, maximum	0.012
<u>Viscosity</u> Centipoises at 25°C., maximum	0.80
<u>Inhibitor</u> (Tertiarybutyl Catechol) ppm, minimum ppm, maximum	10 15

BPACC00404

The data presented in this bulletin are believed to be accurate and reliable. However, since the conditions of use are beyond our control, we can not, and do not, guarantee results. Furthermore, statements contained herein should not be considered as recommendations for any use that may infringe patent rights. In some instances, we have noted trademarks in referring to materials used in our test formulations. This does not necessarily imply that material of any particular supplier is the best of its type, or that we suggest its use. Generally, similar materials may be obtained from other suppliers under other trademarks, and will give equivalent results.



AMOCO CHEMICALS CORPORATION

130 East Randolph Drive  
Chicago 1, Illinois

P. C. LIVESAY  
PRESIDENT

April 16, 1963

Mr. J. L. McCurdy  
Brand Plastics Company  
8400 Willow Springs Road  
Willow Springs, Illinois

Dear Mr. McCurdy:

This will confirm our mutual understanding arrived at with you and Mr. Curtis during the meeting in our offices on April 12, 1963.

We are willing to loan Brand Plastics Company \$400,000 for the construction of a polystyrene plant at Medina, Ohio, contingent, however, upon the execution of a Supplemental Agreement providing for the additional loan and, where necessary, containing modifications to the original Loan and Supply Agreement dated November 1, 1960 and the Supplemental Agreement dated June 26, 1962 and other Agreements between our companies, which modifications are broadly as follows:

1. The option period provided in Paragraph 6 of the original Loan and Supply Agreement will be lengthened to include the entire year of 1965.
2. Correspondingly, the second option period provided in Paragraph 7 of the original Loan and Supply Agreement will be amended to commence on January 1, 1966.
3. The commencement of the period provided in Paragraph 8 of the original Loan and Supply Agreement whereby McCurdy and Curtis may decide to sell their Brand stock and notify Amoco accordingly, shall be amended to be January 1, 1966, and then only in the event Brand is able to repay all loans made by Amoco to Brand including accrued interest.
4. Additional changes in other provisions in the Agreements providing for the original loan and Supplements thereto may be necessary to make such Agreements consistent with items 1, 2 and 3 above, and if so will be made.



April 16, 1963

5. Paragraph 10 of the original Loan and Supply Agreement will be amended so as to exclude Amoco's obligation to meet prices of raw materials by third parties who have a financial or other investment interest in Brand, and a clause will be inserted extending Amoco's right to supply Brand with its total raw material requirements to the successors and assigns of Brand.
6. Consistent with the granting of a \$400,000 loan for the Medina plant, Brand will agree to increase, to one million dollars each, the insurance on the lives of Curtis and McGurdy as provided for in Paragraph 5c of the original Loan and Supply Agreement.
7. The Supplemental Agreement for the proposed \$400,000 loan, among its other provisions, will provide that Brand cannot enter into tolling or other arrangements with others providing for the conversion of styrene monomer belonging to others into polystyrene for their use without first obtaining the written consent of Amoco for such operation. The original Loan and Supply Agreement dated November 1, 1960 and the first Supplemental Agreement dated June 26, 1962 will be amended accordingly.
8. The loan of \$400,000 for the Medina, Ohio, plant will be evidenced by a Promissory Note in that amount executed by Brand. The said Note shall provide for payments in ten equal installments of \$40,000 each. The first installment together with interest at the rate of  $5\frac{1}{4}\%$  per annum shall be due and payable on January 1, 1966, with the right of prepayment only after that date. The remaining installments together with interest shall be due and payable semi-annually commencing July 1, 1966 and continuing until all are paid. The Note shall be secured by a Real Estate Mortgage and a Chattel Mortgage on the Medina, Ohio, property and the fixtures, facilities and equipment used in connection with its operation. The pledge of the stock of Brand and the personal guaranty of McGurdy and Curtis provided in the original Loan and Supply Agreement and the first Supplemental Agreement shall have equal application to the said additional \$400,000 loan.

BPACC00406

Mr. J. L. McCurdy

- 3 -

April 16, 1963

We are proceeding to prepare a second Supplemental Agreement and amendments to the original Agreements, in accordance with the provisions outlined above. It is recognized that additional instruments or agreements may be necessary to effect the intent of the parties with respect to the additional \$400,000 loan. In the meantime, if you agree to the provisions cited above and are willing to execute the necessary instruments to effect the transaction as above outlined, will you please so signify by signing the enclosed copy of this letter and returning it to us, at which time we can set in motion the necessary procedures to grant you the \$400,000 loan.

The purpose of this letter of intent is to accede to your request that you not be held up from purchasing certain key items and making other important commitments while the Supplemental Agreement and other necessary Agreements are being prepared.

Very truly yours,

*P. C. Livesay*  
P. C. LIVESAY

BY:

*J. L. McCurdy*

Date:

4-19-63

BPACC00407

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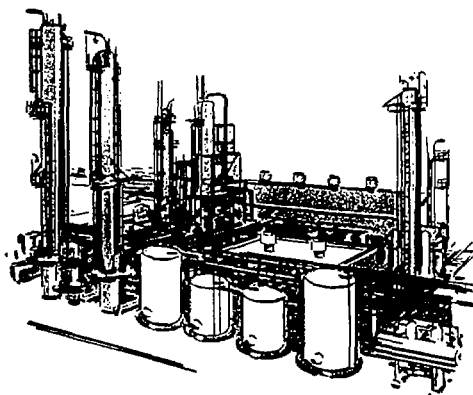
PROPOSAL TO ACQUIRE

BRAND PLASTICS COMPANY

CDR 64-1  
February 14, 1964

**ADMINISTRATIVE  
CONFIDENTIAL**

G. Rieger  
R. D. Sieron  
C. White



BPACC00408

PROPOSAL TO ACQUIRE BRAND PLASTICS COMPANY

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Estimated cost of installing Amoco's benefit plan program in Brand Plastics

## SUMMARY

In 1961, Amoco Chemicals Corporation, anticipating eventual entry into styrene monomer, began financing the establishment and growth of a polystyrene company -- Brand Plastics -- which today has plants at Willow Springs, Ill., Torrance, Calif., and Medina, Ohio, having a combined annual capacity of 58 million pounds.

Conditions of the agreement (under which Amoco has loaned Brand \$1.45 million to date) include rights to supply styrene monomer, and to acquire Brand according to certain conditions, important among which is an option to acquire Brand at a price based on 2.5 times a specified 12-month earnings. Based on Brand's earnings for the 12-month period ending May, 1963, the acquisition price would have been approximately \$500,000. However, due to depressed product prices during the last half of 1963, without compensating raw material price declines, Brand's profit level became sufficiently low so as to motivate Amoco and Brand to enter into a special six-month option agreement, ending April 30, 1964, whereby Amoco has the option to acquire Brand for \$250,000.

As an instrument of forward integration whereby Amoco can captively consume 50 million pounds of styrene monomer annually from its projected Texas City monomer plant, the acquisition is operationally feasible and economically justifiable.

The PI of the integrated system -- Brand Plastics and the pro-rata share of the styrene monomer plant (about 25%) -- is 17 under Brand's present operating conditions (which should result in sales of 36 million pounds or \$4.7 million in 1964 with no improvement in present depressed polystyrene prices), plus installation of Amoco's benefit plans, and \$50,000 of Amoco overhead.

At the projected 1965 sales level of 50 million pounds or \$6.7 million (still assuming no improvement in polystyrene prices), and providing for an additional \$50,000 of overhead expense and modification capital of \$350,000 to improve operating conditions -- the PI on the integrated system is 21.

The PI's cited above are independent of monomer transfer price. If the price of monomer to Brand from the pro-rata share of the monomer plant is set at the value used in the styrene monomer project as set forth in the U. S. Rubber proposal evaluation (9.25¢/lb. transfer price; 8.75¢/lb. netback), the PI on the pro-rata share of the monomer plant is 24 -- and the PI on the Brand acquisition per se becomes 5 and 14, respectively, for the two levels of sales previously cited. This strongly indicates that the 9.25¢/lb. monomer transfer price level is unrealistic under today's conditions.

It is recommended that Standard acquire Brand Plastics Company in a stock-for-stock exchange of \$250,000 of Standard stock for \$50,000 of Brand stock, effective April 1, 1964.

## INTRODUCTION

Brand Plastics makes and sells general purpose and impact polystyrenes. These plastics are made by polymerizing styrene monomer, a hydrocarbon derived from benzene and ethylene. Styrene monomer also finds a principal use as a raw material for the production of synthetic rubber. The composition and degree of integration in the styrene monomer-polystyrene-rubber industry is shown in Table I. Amoco Chemicals plans to build a styrene monomer plant at Texas City for early 1965 operation.

There are numerous types of polystyrene plastics, but the types produced by Brand, general purpose polystyrene and impact polystyrene, represent the greatest volumes; 520 million pounds and 560 million pounds, respectively, in the U.S. in 1963. Each has been growing at a rate of 10 to 15% per year. Growth in the future may slow to about 5 to 7% per year -- still a large annual growth in absolute terms, i.e., 25 to 40 million pounds per year for each type.

General purpose polystyrene, a clear, brittle, glossy plastic, is formed into housewares, toys, wall tile, premiums and novelties -- all representative of highly competitive markets, relatively easily entered on a price basis; relatively easily lost on a price basis. These markets today have flexible, non-specification, minimal quality standards and require little technical service.

On the other hand, impact polystyrene, an opaque, tougher plastic, and more difficult to make than general purpose polystyrene, is used principally for relatively highly engineered, tightly specified end uses such as appliances, refrigerators, office equipment and automotive parts. These are uses where new candidate materials must undergo long-term acceptance tests. A new producer of impact of his own development is faced not only with more complex production and quality control problems than he would be compared with general purpose, but he is also faced with markets considerably less amenable to quick entry on a price basis; indeed, impact polystyrene prices are at least 25% higher than general purpose polystyrene prices.

There are, as would be expected, intermediate areas of use-quality-price so as to create an almost continuous spectrum between the categories cited in the foregoing two paragraphs. This has given rise to gradations in impact such as "high impact", "medium impact", and "impact". Recently there have been developed super-impacts, almost rubber-like in their properties, e.g., the plastic case for Paxton cigarettes.

Table-II summarizes recent historical and forecast consumption by type and end-use.

The domestic polystyrene market is geographically distributed approximately as follows:



	Estimated 1963 U.S. Consumption MM Lbs.	%	
East Coast (above the Virginias and east of Ohio; concen- trated in New England and Mid-Atlantic)	365	38	Highly competitive; heavy in general purpose
Mid-West (Mich., Wisc., Mo., Ill., Ind., Ohio and Ky.; con- centrated in Great Lakes area and Ohio)	440	46	Heavy in impact for appliances
West Coast (75% in L.A. area)	150	16	Heavy in general purpose
	<u>955</u>	<u>100</u>	

Polystyrene production and sales are dominated by the so-called "majors", notably Dow, Monsanto, Koppers, Foster Grant and Carbide. Each member of this five-company group, as well as three smaller producers, is integrated back to styrene monomer, as compared with the some dozen "independents" who must purchase their monomer; see Table III. The non-integrated "independents" account for only about 14% of total sales.

Anticipating eventual production of styrene monomer for both the rubber trade and for plastics, Amoco in 1961 financed two experienced polystyrene marketing and production men, Mr. R. L. Curtis and Dr. J. L. McCurdy, in the formation of their own independent polystyrene company -- Brand Plastics -- with initial facilities to be located at Willow Springs, Ill.

In return for such assistance Amoco was given the rights to supply all of Brand's raw materials, principally styrene monomer, at competitive prices; and to acquire Brand under certain specified timing, terms, and conditions foremost of which was that the acquisition price was to be approximately 2.5 times annual earnings.

A summary of loans to Brand and the facilities established therefrom is given in Table IV which shows a total indebtedness to Amoco of \$1,450,000 of which \$1,325,000 is long-term debt.

With the consummation of its styrene monomer project in sight, Amoco in 1963 began plans to exercise its option to purchase Brand. Based on Brand's fiscal 1963 earnings, the acquisition price would have been approximately \$500,000. However, severe price depression and other competitive pressures by the majors, beginning near the end of Brand's fiscal 1963, led to the recognition by both parties that foreseeable profits could

not justify a price based on a 12-month period of earnings relatively free of the profit depressing price situation. Thus, a six-month option agreement, ending April 30, 1964, was entered into under the terms of which Brand could be purchased for \$250,000 cash. In signing, Brand's principals expressed a desire to receive Standard (Indiana) stock in lieu of cash, and Amoco agreed to explore this approach.

Also immediately upon signing of this option, Amoco accelerated the several evaluation programs it had underway aimed at the original first option date of mid-1964.

It is the purpose of this report to set forth the information and economics offered in support of Amoco's recommendations that Brand be acquired by exchanging \$250,000 in Standard (Indiana) stock for \$50,000 in Brand's stock; and that Brand be operated as a wholly-owned, but relatively autonomous subsidiary for the primary purpose of providing an instrument of forward integration for approximately 50 million pounds annually of Amoco styrene monomer.

## BRAND'S PERFORMANCE AND CURRENT POSITION

Brand's performance to date has been reasonably good and close to plan with regard to installation of facilities on schedule; achievement of forecasted low operating costs; and attainment of good physical sales volume in general purpose and fair volume in impact, despite recent severe price and other pressures by the majors.

### Sales Volume

Brand Plastics commenced line-out operations in July of 1961, and in the first full year of operation sold approximately 11 million pounds of product. In its second fiscal year of operation, ending June 30, 1963, sales increased to about 27 million pounds. Brand is currently selling at an annual rate of about 30 million pounds (4.0 million dollars) which represents about 3% of the total U. S. production. During these two and one-half years of existence, capacity of the Willow Springs plant was increased stepwise from 11 to 32.5 million pounds. The Torrance, Calif., plant (capacity 13.5 million pounds) was constructed and brought on stream in November of 1962; and the Medina plant (capacity 12.0 million pounds) brought on stream in December, 1963. Excluding Medina, the company is currently operating at about 64% of capacity, with Willow Springs running at 65% and Torrance at about 59%. Brand's sales by manufacturing location and by product are presented in Figs. 1 and 2. Sales are seasonal; lows occur at the beginning and middle of the year; highs in May and August.

### Analysis of Sales

Since July of 1963 (Brand's second fiscal year), Amoco has had access to Brand's sales invoices for the purpose of sales analysis. Brand's customers currently number about 300. By comparison there are about 2,000 molders and extruders of thermoplastic materials in the United States. Basically, Brand services the smaller fabricators that specialize in low to medium quality applications. About 30-35% of sales move through resellers or color-compounders. Excluding resellers, Brand has only three customers in the 1-2 million pound per year range; three customers in the 300,000 to 1,000,000 pound per year range; and thirty-five customers in the 100,000 to 300,000 pound per year range. The remaining 260 accounts are below 100,000 pounds per year in size.

Brand has achieved a fairly stable pattern of sales at Willow Springs, especially with respect to general purpose. The larger general purpose accounts purchase consistently every month, and the overall pattern of sales suggests that Brand has made a permanent and significant penetration of the Mid-west market. Brand's impact, however, is in a more precarious marketing position. Brand has only one impact account in the million-pound per year class, and only eight accounts taking over 100,000 pounds per year. The sales pattern for impact is also considerably more erratic than it is for general purpose. That is, the sales at each account seem to fluctuate more, and even with their large accounts there are months when no sales are made.

After 15 months of operation, the Torrance plant has yet to capture a solid portion of the West Coast market. (As previously stated, Torrance is operating at about 59% of capacity.) Better than 50% of Torrance's sales move through resellers and a sizable block of general purpose moves into export. Brand has established only a handful of significant accounts here and the sales pattern even among these is erratic. Unfortunately, Torrance was just commencing lined-out operations at the time when the polystyrene prices began to drop. Brand has consequently had a more difficult time making a penetration of the West Coast market.

Brand's end use pattern for general purpose and impact (Willow Springs only) is compared with the total U. S. market in Tables V and VI. Table V shows that except for foam, lighting fixtures and signs, which are specialty applications (for which Brand has no special grade), Brand's general purpose is used across the board in essentially all of the applications in which general purpose polystyrene is consumed. Even though it had not been specified, Brand's general purpose has been used in one refrigerator application. Brand's general purpose has enjoyed good acceptance in the polystyrene market place.

The story with respect to impact is quite different, however, as shown in Table VI. The specification market (refrigerators, television, appliances) is the largest and most important for impact polystyrene. All of these applications require a high quality resin, a colored product with a strict color control, and a six-month or even longer qualification period. Due to admitted lower quality of impact; no equipment for coloring; and general lack of reputation; Brand does not sell any impact to the specification market.

#### Marketing Tactics

Brand has achieved its penetration of polystyrene markets due basically to two factors: (1) the experience and marketing know-how of Messrs. Curtis and McCurdy; and (2) an aggressive pricing policy. In addition, Brand's service has been excellent. Being a newcomer, Brand has been "hungry" and aggressive, and since they are located in the heart of the markets they can often make same-day delivery. With rapid penetration an absolute necessity to survival, Brand deliberately aimed its initial efforts at the non-critical markets. In this area, price is the most important consideration.

Brand's typical sales approach has been to sample a customer with a sufficient quantity to establish that Brand's product is technically satisfactory, and then establish on the spot the price necessary to make the sale.

Brand cannot afford, nor does it feel it necessary to make, any investment in marketing expenditures having a long-term payout, e.g., a technical service laboratory. It is important to realize, therefore, that

Brand has achieved its current successful penetration of the polystyrene market with no trade position to capitalize on; with essentially no advertising or other sales promotion; and with no technical service laboratory or product testing capability.

In recent months, Brand's poor working capital position has inhibited sales. Brand has been forced to keep an extremely tight check on inventory and accounts receivable, turning down, in some instances, business from slower paying accounts.

#### Geographical Position

Geographically speaking, Brand is ideally situated to serve the polystyrene market. Its three plants, Willow Springs, Medina and Torrance, are located in the heart of the Mid-west and West Coast markets. With Brand's process and operating philosophy, fixed costs are only about 20% of total cost. Economies of scale are, therefore, small and hence incentive is low to build large plants. Brand has effectively moved toward the ideal of flexible, economic, decentralized polymer operations close to the markets.

#### Purchases of Amoco Styrene Monomer

Upon Amoco's entry into styrene monomer in 1963 (via custom conversion of its benzene by Dow and Monsanto), Brand began taking most of its requirements (Torrance under contract through 1964 to Shell) from Amoco. In 1963 Brand was Amoco's single largest customer for styrene monomer, taking 20 million pounds (\$2.0 million) or 38% of Amoco's total sales of 52 million pounds, which made Brand Amoco's fifth largest customer (behind Goodyear, American Oil, American International Oil Co., and Thompson Products). Gross profit on these 1963 monomer sales to Brand (charging benzene at market) was \$215,000.

It is anticipated that in the first year of operation of Amoco's projected new styrene monomer plant at Texas City, Brand will consume 50 million pounds of monomer, about 25% of the forecasted total monomer sales.

#### Financial Performance

In its first lined-out fiscal year of operation ending June 30, 1962, Brand showed a profit at Willow Springs, then its only operating plant, of \$30,800 on net sales of \$1,644,000 (1.9% on sales) despite the fact that this was a year of struggling to bring on stream new lines and start establishing a position in the market place.

The next fiscal year ending June 30, 1963, embracing about six months operations at Torrance, showed a profit of \$137,000 on net sales of \$3,162,000 (4.3% on sales). See Tables VII, VIII and IX.

Thus in somewhat over two fiscal years of operation Brand not only progressed well in achieving good market penetration and fulfillment of its role as a potential instrument of forward integration for Amoco's styrene monomer, Brand also operated at a profit -- a remarkable achievement.

However, trouble began looming on the horizon during the last half of fiscal 1963. Beginning in about March, 1963, and continuing up to date, the majors have made a concerted effort to meet, and in some cases go under, prices quoted by the independents. Thus, in recent months Brand has found it difficult to hold its share of the market, and it has operated in and out of the red due to Medina start-up expenses and polymer prices dropping faster than styrene monomer price. Amoco did not lower its monomer price to Brand to the present 9.5¢/lb. delivered level until November 1, 1963. At the previous 10.0¢/lb. price, it could be argued that Amoco was not pricing monomer to Brand realistically, i.e., reflecting what other independents were obtaining, notably in the East. With monomer representing nearly 80% of polymer costs, fractions of a cent can be the difference between profit and loss as will be more adequately illustrated in later sections on economics. Based on the first seven-months experience, it is projected that for the nine-month period July 1, 1963, to March 31, 1964, Brand will lose, largely due to Medina start-up, \$65,600 on sales of \$2,970,000. See Tables X, XI, and XII which set forth the forecast used in the later sections on economic evaluation. These projections, and hence the evaluations are subject to revision pending an Ernst & Ernst audit as of January 31, 1964; significant changes are not anticipated.

#### Prices

By far the greatest profit depressant has been severe price competition by the majors, e.g., Dow, Monsanto and Koppers -- ostensibly in an effort to straighten up "disorderly" independents. However, in view of the fact that the so-called independents, or more appropriately, the non-integrated (no monomer production of their own), account for no more than 14% of all production, see Table III, there is a view in some quarters that the price drops, started in March of 1963 and accelerated in May of 1963, were aimed at discouraging Brand and Amoco.

This view is held by many. In the course of its field program, Arthur D. Little uncovered a body of opinion in the industry that the majors' pricing strategy has been aimed at destruction of the independent producer -- some saying that this included Brand; others saying that it was specifically Brand. The latter view warrants review here; it goes like this:

The price of polystyrene has been declining steadily, if not steeply, for the past seven years. During Brand's first two years of operation (all at Willow Springs) prices had, however, plateaued somewhat which facilitated Brand's initial market penetration.

The integrated majors essentially ignored Brand's Willow Springs operations during this period, as they had historically ignored all independents obliged to buy monomer from them. When they saw Brand branch out to Torrance in November of 1962, they began to rouse because here was an independent not content to stay in its market corral. The majors had been aware for over a year of "some sort of tie" between Amoco and Brand. However, the majors that guessed that Amoco might be setting up a captive consumer for an eventual monomer plant figured that they would have at least 18 months to two years to plot strategy after the day they picked up Amoco's plans to build a monomer plant.

But Amoco collapsed this lead time by entering the monomer market in June, 1963, via having its benzene custom converted to monomer by Dow and Monsanto -- the top majors in polystyrene! Even then, probably because Amoco's entry was rationalized by citing its ability to sell the rubber industry, neither Monsanto, Dow, or any of the other majors appeared to give much importance to Brand, and its rumored relationship with Amoco. There is evidence that the majors at the time of Amoco's entry into monomer in June, 1963, never could add up much more than 100 million pounds per year monomer potential, clearly too little for an economically-sized plant.

However, by March, 1963, Dow perhaps fearing that Amoco might grow into another Foster Grant, drastically broke list prices. Others followed. By May the majors once content to yield marginal customers to the independents, were meeting prices and terms everywhere.

Once having embarked on this course of action, however, the majors found themselves also competing vigorously with one another. One industry observer put it this way: "The top dogs (Monsanto, Dow and Koppers) started out to get the cat, but ended up in a dog fight." Dow and Monsanto had made the mistake in the past of ignoring price competition from an independent, Foster Grant, only to see Foster Grant grow to be the third largest producer, fully integrated, and a major factor in the market place. They apparently have firmly resolved, therefore, not to make this mistake again if they can help it.

As matters now stand, while there are price lists for polystyrene, almost every sale involves a separately negotiated price. Prime general purpose polystyrene sells for anywhere from 11.5 to 14.0¢ per pound; prime high impact, from 17 to 19¢ per pound for general molding applications and up to 21¢ per pound for the specification market. In recent months, however, the price decline has abated, and price shaving is now in terms of tenths of cents per pound rather than the 0.5 to 1.0¢ per pound increments of early 1963.

What will happen to polystyrene prices in the future? No one can say for certain, of course, as this will depend on the industry operating factor and the pricing policies of all competitors. It is possible, however, that if the majors current policies were aimed largely

at discouraging an Amoco acquisition of Brand and/or an Amoco monomer plant, after acquisition, Dow and Monsanto may recognize the inevitability of Amoco's economic position (i.e., captive, low cost styrene plus low cost conversion to the polymer) and change their tactics.

There is another basis for speculating that prices might firm. In 1963, U. S. polystyrene facilities reportedly operated at about 90% of capacity. If the current rate of growth continues into 1964, it is quite possible that some tightness in supply might develop. This is what happened recently in the vinyl industry with the result that prices have turned up slightly and are holding.

There are pros and cons of almost equal creditability. Hence, no forecast of any change from 1964's netbacks are made herein other than that due to changes in product mix. The effects of possible lower and higher netbacks are recognized and spoken to, however, in later sections on the economic appraisal of the Brand acquisition.

One point is crystal clear. Amoco need not hold to its previous fears of how it could, upon acquisition of Brand, continue Brand's pricing policies. While some restoration of orderliness may be prudent action by Amoco, there need be no concern on Amoco's part that any major producer can today piously point its "list" price finger at Brand.

Whatever one may speculate as to the future, Brand's price and netback history has been as follows compared with its overall cost history; see also Fig. 3.

BRAND'S QUARTERLY PRICE, NETBACK AND COST HISTORY  
Cents Per Pound

	<u>Price, Dlv'd.</u>		<u>Avg. Netback</u>	<u>Avg. Total Cost</u>
	<u>Gen'l. Purp.</u>	<u>Impact</u>	<u>(All Products)</u>	<u>(All Products Including SAR)</u>
<u>1962</u>				
3rd	14.6	17.4	14.9	13.3
4th	14.7	17.3	14.1	13.0
<u>1963</u>				
1st	14.4	16.6	15.1	13.8
2nd	13.6	17.5	14.4	13.5
3rd	12.8	15.7	13.3	13.4
4th	12.6	15.7	13.2	13.0



## Product Quality

Of secondary effect on Brand's profits but nonetheless significant, have been quality problems, mainly in impact, which have contributed to lower average netbacks. The nature and extent of Brand's quality problems, and their recent effects upon sales volume and price are virtually impossible to quantify. Moreover, it must be recognized that Brand has had two types of quality problems: (1) Variation between lots, lines and plants; and (2) lower quality than competitors, regardless of variation, in certain grades. The commercial significance of the latter cannot be divorced from price, as (polymer price)-(level of quality) is the "unit" of acceptance. For many of Brand's customers, lower-than-competitive quality, if constant, would be acceptable at the right price; and the right price could well be profitable. If, however, the first cited quality problem, variability, becomes severe, the customer simply stops buying regardless of price.

Admittedly variability of quality and low level of quality are not necessarily mutually exclusive, but they appear to be largely so. It appears that two different approaches must be made toward solving the two types of quality problems. Variability lies in plant operations and invites better control. Improvement of absolute quality level often requires development of new products and/or process modification.

Recognizing the importance of quality evaluation in considering the acquisition of Brand, a four-pronged program was launched in September of 1963 consisting of:

1. A detailed technical evaluation of Brand's crystal and impact by the consulting firm of DeBell & Richardson.
2. A similar evaluation on samples sent to Amoco Plastics Research Corp. in Japan.
3. A continuing evaluation by Amoco's Technical Service Laboratory on samples of Brand's impact collected during the period September-December, 1963.
4. A field survey of the injection molding industry's opinion of Brand's quality (as well as other marketing factors) conducted by Arthur D. Little, Inc.

The results of all four investigations are in good agreement and indicate that:

- A. Brand's general purpose polystyrene is a good commercial material, suitable for about 75% of the applications of general purpose on a weight basis. Areas needing attention are color consistency; and the development of high heat and light stable grades.
- B. Brand's impact grades are not good commercial materials due principally to lot-to-lot variability, and deficiencies in several important

qualities. Improved plant control and product development are indicated. (Brand's impact process has actually been under development on a plant scale. Each new reactor embodies designs and procedural changes dictated by the last previous design and experience.)

- C. The trade holds Brand's principals in high regard; considers its general purpose satisfactory; regards its impact grades as questionable; deems its sales and service effective.

For more comprehensive summaries, see Appendix A.

The results of the programs have been in Brand's hands for several weeks, and quality control and improvement programs are already being formulated in cooperation with representatives of Amoco's Research Department and Technical Service Laboratory. Prospects of improving quality control without undue additional expense appear good. Prospects of developing improved product to reach markets not now attainable (even if control were improved) remain unevaluated. However, as will be more fully shown in later sections, capital for improvement is being provided in the economic evaluation of acquisition.

#### Sales Forecast

With what appears to be reasonably achievable improvements in quality; the bringing of Medina up nearer to capacity (and hence moving the product mix to a greater percentage of the higher priced impact); and in view of strong evidence that prices are leveling out -- the following forecast of sales and average netbacks is made.

	Million Pounds			
	Actual 1963	1964	1965	1966
Willow Springs				
Crystal	15	18	22	23
Impact	6	6	8	10
Torrance				
Crystal	3	4	5	7
Impact	3	4	5	6
Medina				
Crystal	-	-	-	-
Impact	<u>nil</u>	<u>4</u>	<u>10</u>	<u>12</u>
Total	27	36	50	58
% of U. S. Total Sales	2.5	3.0	3.9	4.3
Ratio, Impact/Gen'l. Purp.	0.33	0.39	0.46	0.48
Average Netback, ¢/Lb.	13.4	13.2	13.4	13.4

EVALUATION OF RISK OF  
VIOLATING PROPRIETARY RIGHTS OF  
OTHERS THROUGH ACQUISITION OF BRAND

Messrs. Curtis and McCurdy were employees of Dow before going into the plastics business for themselves. McCurdy is the co-author of several inventions relative to polystyrene processes assigned to Dow. After severing relations with Dow these gentlemen's first entry into polystyrene was as Granada Plastics which made only general purpose polystyrene. Granada was subsequently purchased by Rexall and operations moved to a new site. Also McCurdy's first design of a process for his own production of impact was finalized while in the employ of Rexall.

Thus, a very important first step in evaluating the possible acquisition of Brand was the determination of the degree of exposure, if any, Amoco might inherit with respect to patent infringement and misuse of confidential information or trade secrets, be they process or market. Such determination was made by the West Coast law firm of Lyon & Lyon working with representatives of Amoco's Legal and Marketing Departments; American's Patent & Licensing Department; and Curtis and McCurdy themselves. The following excerpt from Lyon & Lyon's final opinion letter of December 2, 1963, indicates no exposure is apparent:

"We thus have concluded that insofar as Dow and Rexall trade secrets, confidential information and the two patents brought to our attention are concerned, no substantial impediment stands in the way of acquisition of the Brand stock by Amoco. In this, we have also gone over the matter of marketing practices of Brand with yourself directing particular attention to whether any exposure based on secret customer lists, customer requirements and the like, is present. Again, based on the information we have, we are of the opinion that Brand is in the clear."

Complete texts of Lyon & Lyon's opinion; and Patent & Licensing's concurrence may be found in Appendix B.

## INVESTMENT AND TOTAL EXPENSES

Current investment and total expenses for Brand's operations have been modified where required to reflect appropriate changes which would result if the Company is acquired and operated as a subsidiary. Departures from actual Brand costs will be pointed out.

### Brand's Polystyrene Process

Brand's process is simple, inexpensive and efficient. Approximately 2,000 gallons of styrene monomer and additives are charged to a batch reactor which is essentially a large heat exchanger. The non-catalytic reaction is initiated by heating the reactants up to 250°F. The polymerization of styrene is exothermic, so once initiated heat must be removed rapidly. The reaction is complete in 8-10 hours, depending upon the product being made. The viscous polystyrene is then pumped to a hold tank from which it is continuously extruded in 1/8 inch diameter strands which are cooled, chopped into pellets, and packaged. While the hold tank is being emptied another batch reaction is initiated and will be completed before the hold tank is emptied. Thus, the Brand process is a batch-continuous operation. It was designed to produce products for the non-critical markets.

As cited on Page 13 and in Appendix B, it has been determined by legal experts that acquisition of Brand would involve no undue risk of violating the proprietary rights of others, process and market.

### Investment

As previously mentioned Amoco-Standard has an option to acquire the capital stock of Brand Plastics for \$250,000 of Standard Oil stock. All assets and liabilities of Brand as of March 31, 1964 would be acquired and assumed by Amoco-Standard. Since one of the liabilities of Brand is an outstanding loan of \$1,450,000 from Amoco, the effective acquisition price would be \$1,700,000. Details of the value received for this expenditure are shown in Table XIII. Tangible worth would total \$1,500,000; the remaining \$200,000 would be classified as "going concern value". However, it should be pointed out that the original cost of Brand's fixed assets was \$1,500,700 as compared to the undepreciated balance of \$1,233,500 shown on the tax books. Thus if we were to go out today and duplicate Brand's two year old operation, the cost would be at least \$1,766,000 ex the know-how and established customer position which Brand affords.

Two basic cases have been set up to evaluate the incentive to acquire Brand Plastics. The first assumes that Brand will continue to operate as it now does, except to have Amoco's benefit plans program initiated, and to incur some Amoco overhead charges. No allowance has been included for process modifications to insure reproducibility of product quality. Sales during 1964 on this basis of operation are forecast

at 36 million pounds (nearly the current rate of sales) and no changes in netbacks from today's level.

The second case provides a \$350,000 contingency fund for process modifications to assure product reproducibility. It is quite possible that the expenditure of this sum of money would, in addition to providing product uniformity, increase the absolute level of product quality. It has been assumed that the expenditure of the \$350,000, which could be a high figure, would solve product quality problems sufficiently well to enable 1964 sales of 36 million pounds to increase to 50 million pounds in 1965. No credit has been taken for the likely possibility that a more uniform, predictable product quality would also be reflected in higher netbacks.

Net working capital has been appropriately increased from Brand's current level to reflect the higher sales levels and a reduction in monomer credit terms to more realistic figures, i.e. from 120 days to 90 days. In the plastics industry it is typical to average more than 60 days on accounts receivable and the styrene monomer supplier is expected to extend similar credit terms.

The Amoco-Standard total investment in the Brand operation for the two operating levels used in this evaluation, 36 MM lb./yr. and 50 MM lb./yr., would be \$2.05 million and \$2.60 million, respectively. Also to keep abreast of competition, a contingency of \$20,000 per year after the fourth year of operation has been included for sustaining capital in this evaluation; a total of \$320,000 set aside over the assumed project life (40% of the original cost of all machinery and equipment in Brand's plants).

#### Raw Materials

Production of 50 million pounds per year of polystyrene would annually consume close to 50 million pounds of styrene monomer. Brand's polystyrene process is very efficient. No solvent or suspending solutions are used thus avoiding sources of losses common in other commercial processes. Yields average 99% or better. Typical material balances for Brand's two primary products, easy flow general purpose and impact, are:

	<u>General Purpose</u>	<u>Impact</u>
<u>Raw Materials, Lb./Lb. Product</u>		
Styrene Monomer	0.979	0.878
Internal Lubricant	0.025	0.060
Styrene-Butadiene Rubber	0.000	0.060
Antioxidant	0.000	0.006
External Additives	0.001	0.001
	<u>1.005</u>	<u>1.005</u>
<u>Efficiency</u>	99.5%	99.5%

Styrene monomer is, of course, the major raw material consumed in the manufacture of polystyrene. The price of monomer to the independent polystyrene producers is under pressure. Although the list price is 10.66¢/lb. delivered, it is known that at least two East Coast polystyrene producers are today purchasing monomer at 9.25¢/lb. delivered. For the integrated monomer-polymer producer, the transfer value on monomer has no effect on the overall profitability of the integration other than to police the marketing practices of the polymer end of the business. In this evaluation a transfer price of 9.25¢/lb. delivered has been utilized. This corresponds to the value used in the "U. S. Rubber Company Styrene Proposal" for the share of the output assigned to Brand. There is evidence that this number may be unrealistically high by about 0.25¢/lb. in view of current polystyrene price levels.

The prices used herein for styrene-butadiene rubber, internal lubricant, antioxidant, and surface treatment additives are those currently being paid by Brand.

Summarizing, the raw material costs associated with producing a pound of easy flow, general purpose and impact polystyrene in Brand's operations when using 9.25¢/lb. monomer are 9.33¢ and 10.47¢/lb., respectively. For the product mixes used in the two basic evaluation cases, the corresponding average raw material costs are 9.77¢ and 9.86¢/lb., respectively, as shown in Table XIV.

#### Processing Costs

These costs, detailed in Table XIV, are based upon actual Brand experience at its three plants. The cost of substituting Amoco plans and benefits for Brand's has been taken into account. The processing cost at each of Brand's three plants are essentially independent of plant size at capacity operation on a cents per pound basis. Naturally the cost varies with percent of capacity being utilized. This is shown in Table XIV. At the 36 MM lb./yr. level, processing costs amount to 1.77¢/lb. product; at the 50 MM lb./yr. level, 1.43¢/lb.; and at capacity operation of 58 MM lb./yr., the processing cost would be 1.31¢/lb. Note that the absolute level of cost is extremely low. When coupled with low overhead and low investment this type of an operation can present formidable competition to any of the established major polystyrene producers. It is quite likely the cheapest method known to convert styrene monomer into salable polymers.

#### Sales and Administrative Expense

The sales and administrative expense used in this evaluation are broken into two distinct categories: Brand per se and that attributable to Amoco. Brand's expenses include the cost of applying Amoco's plans and benefits to the personnel in this category and the addition of another salesman at Medina. The burden added by Amoco includes administrative expense and technical assistance. Research and Sales Technical Service,

and marketing charges from Amoco have been estimated at \$50,000/year for the 36 MM lb./yr. sales case and \$100,000 for the 50 MM lb./yr. case wherein the additional \$50,000 is to provide for the increased technical assistance that is visualized to be required to effect the increase in sales (note previous reference to an associated modification capital expenditure of \$350,000).

#### Project Life and Depreciation

It has been assumed that the polystyrene plants will have plant lives of 20 years. Sustaining investment has been included to replace the "severe operational equipment" as required. The total value of this class of equipment is about \$250,000. Several polystyrene plants have been in existence for 20 years or more. The 20 year project life also parallels the associated plant life of Amoco's monomer plant.

The effect on profitability of assuming lives of 15 and 10 years will be shown, however, in the subsequent evaluation section.

Brand's current depreciation methods have been utilized in this evaluation. A portion of the Willow Springs plant is being depreciated on a straight line basis (undepreciated balance will be near \$450,000 on March 31, 1964). All other properties are being depreciated on the double declining balance method.

Note that the total out-of-pocket cost of manufacturing and marketing polystyrene (total expenses less depreciation) with monomer priced at a transfer value of 9.25¢/lb. is 12.5¢/lb and 12.1¢/lb. for the two operating levels of 36 MM lb./yr. and 50 MM lb./yr., respectively.

## PROFITABILITY ANALYSIS

The foregoing investment and expense bases have been used to establish the summary economics, presented in Table XV. In both cases of sales volume, evaluation is at a styrene monomer transfer price of 9.25¢/lb. delivered, the price used in the "U. S. Rubber Company Styrene Proposal" for sales to Brand and now being paid by some East Coast polystyrene independents.

The PI on the Brand acquisition per se, ex profitability of styrene monomer, is 5.0 if Brand's market penetration is stopped out at forecasted 1964 sales of 36 million pounds per year at today's prices. If sales reach the forecasted 1965 level of 50 million pounds the PI on Brand per se is 13.5. In both cases the PI on the pro-rata share of Amoco's Texas City monomer plant would be 24.1 at the average monomer transfer price of 9.25¢/lb. delivered (8.75¢/lb. netback at Texas City).

At today's prices the overall PI on the entire integration (beginning with benzene and ethylene as raw materials to the styrene plant; including a pro-rata share of the monomer investment and manufacturing cost; and including Brand's polymerization investment and manufacturing cost) is 16.8 at the sales level of 36 million pounds per year; 20.5 at 50 million pounds per year.

This comparison of the economics of the two elements of integration -- monomer plant and polymer plant -- with the whole shows that the independent polystyrene producer (one not basic in monomer) today is in a tight profit squeeze as a result of the monomer producer maintaining a relatively high price level on styrene while the price of the end product, polystyrene, declines. In order to survive, the independent polystyrene producer must have a lower monomer price. Table XV illustrates that at today's monomer and polymer prices even a low-cost producer such as Brand would be netting at most 1-2% on sales and 5% return on invested capital if production facilities are operated at 60% capacity. It is interesting to note, however, that even at today's prices Brand as an operation would show a PI of 13.5 at 85% capacity.

Various profitability index sensitivities on the two Brand operating levels are listed in Table XVI, which again points out the sensitivity of project profitability to raw material and product prices contrasted to the relatively low sensitivity to investment and operating cost. A 1% change in the price of polystyrene would yield the same result as a 1.5% change in monomer; 11% change in all other raw materials; 8.5% change in total processing costs; \$300,000 change in investment; or a decrease of 6 years in project life.

Figs. 4 and 5 illustrate the sensitivity of the polystyrene producer's profit to the price of polystyrene and cost of his styrene monomer. Fig. 4 shows that at Brand's current average netback of 13.2¢/lb. on polystyrene a minimum monomer price of about 8.25¢/lb. delivered would be required to yield a return on invested capital of 15 PI. At this price the PI on the pro-rata share of the monomer facilities would be 18. The



monomer price at which equal PI would be obtained on both the monomer and polymer plants (16.8 PI) is 8.1¢/lb. delivered.

The possibility of lowering the price of monomer to Brand in order to allow the company to operate at a profit is the only real alternative which Amoco has if the volume of monomer at stake, about 50 million pounds starting in 1965, is to be protected. The management problem here, however, is that if Amoco were to afford Brand a lower monomer price experience to date indicates they might give most of it away in order to expand operations or maintain current accounts. Thus Amoco could be faced with replays of today's situation without the organizational position to alter such a course. Further, if the price of polystyrene were to firm up our option to acquire Brand stock at the attractive price of \$250,000 might forever be gone.

On the basis of the foregoing analysis and the long-term protection afforded part of Amoco's projected styrene monomer operations by forward integration into polystyrene, it is recommended that Standard acquire all of the capital stock of Brand Plastics Company in exchange for \$250,000 worth of Standard's stock.

## ORGANIZATION AND EMPLOYEE RELATIONS

A study of the organizational structure, labor relations situation and benefit plan program of Brand indicated that Brand's positions could be easily slotted into Amoco's salary and position structure; and that the union contracts negotiated by Brand do not present any serious problems.

It is visualized that Amoco's benefit plan program would be installed immediately upon acquisition; and costs therefor have been included in the economic evaluations. See Appendix C for details.

## MODE OF ACQUISITION

In connection with the proposed acquisition of Brand by Amoco, various methods of effecting the acquisition were considered:

- (1) The purchase of all of the Brand stock for cash;
- (2) The purchase of the assets of Brand for cash;
- (3) The exchange of Standard stock for the assets of Brand;
- (4) The exchange of Standard stock for the stock of Brand on an agreed exchange basis.

After taking into consideration the interests of all of the parties concerned, including McCurdy and Curtis, it has been determined that the most desirable acquisition procedure to follow would be an exchange of an agreed number of shares of Standard (Indiana) stock for all of the stock of Brand.

Under existing provisions of the Internal Revenue laws and regulations, to have a non-taxable transaction the form of the transaction should be a corporate reorganization of Brand Plastics Company whereby Standard would exchange an agreed number of shares of its stock for the stock of Brand, and Brand would thereupon become an operating subsidiary of Standard. However, under the proposed Revenue Act of 1964 an amendment is now under consideration by the Senate which would enable Amoco to effect the exchange of Standard stock with Brand, and Brand would become a subsidiary of Amoco. At this time it is not known whether the proposed amendment will be adopted, and pending such adoption the exchange by Standard of its stock for the stock of Brand is recommended.

TABLE I

INTEGRATION IN STYRENE MONOMER, POLYMERS, AND FABRICATED PRODUCTS

	<u>Monomer</u>	<u>Polymer</u>			<u>Other Styrene Resins</u>	<u>Fabricated Products</u>
		<u>Poly- styrene</u>	<u>SBR*</u>	<u>SB Co- polymer</u>		
Dow Chemical	x	x		x	x	Foam, film
Monsanto Chemical	x	x		x	x	Foam, film
Koppers	x	x		x		Foam
Shell	x	x	x			---
Foster-Grant	x	x				Molding
Union Carbide	x	x			x	Film
El Paso Natural Gas-Rexall	x	x				Molding
Suntide	x					---
Cosden	x	x				---
Koppers-Sinclair	x					---
Borg-Warner (Marbon Div.)	x			x	x	---
Goodyear Tire & Rubber			x	x	x	Tires, indus. prods.
Firestone			x	x	x	Tires, indus. prods.
Goodrich-Gulf			x			Tires, indus. prods.
Phillips Petroleum			x			---
W. R. Grace (Dewey & Almy)				x	x	Impreg. can sealing compounds
American Syn. Rubber (Am. Biltrite & others)			x			Tires, indus. prods.
Copolymer Rubber & Chemicals (Armstrong Rubber & others)			x			---
Ashland Oil Company (United Carbon)			x			---
American Rubber & Chemical (Stauffer & Amer. Syn. Rubber)			x			Tires, indus. prods.
Texas - U.S.			x			Tires, indus. prods.
General Tire			x	x	x	Tires, indus. prods.
Richardson (Plastics Corp. of America)		x				---
Atlantic Refining (Massachusetts Plastics)		x				Molding
Brand Plastics		x				---
Solar Chemical		x				Molding

\* Styrene (23%)-butadiene rubber

Source: Trade literature

TABLE II  
HISTORICAL AND  
FORECAST U. S. POLYSTYRENE DEMAND  
Millions of Pounds

	Historical			Forecast		Growth Rate %/Yr.
	1961	1962	1963	1964	1968	
General Purpose	455	485	520	550	680	5
Impact	385	445	560	650	820	6
Total	840	930	1080	1200	1500	6
General Purpose	395	405	425	445	525	4
Foam	60	80	95	105	155	10
Impact	385	445	560	650	820	6
<u>End-Use Pattern</u>						
Packaging	135	155	180	215	300	
Appliances	125	155	180	205	250	
Lighting & Signs	28	30	32	35	45	
Foam	60	80	95	105	155	
Housewares	60	75	95	110	150	
Toys, Premiums & Novelties	90	110	130	150	200	
Wall Tile	25	20	20	20	20	
Ion Exchange	20	25	30	32	40	
Flooring	10	12	15	18	25	
Wax	15	15	15	15	15	
Pipe	-	-	12	15	25	
Miscellaneous	47	53	61	65	75	
Reprocessed	70	80	90	95	100	
Exports	135	100	100	100	80	
Inventory Buildup	20	20	25	20	20	
	840	930	1080	1200	1500	

TABLE III

POLYSTYRENE PRODUCERS - THEIR PLANT LOCATIONS AND CAPACITIES

<u>Producers</u>		1963 Capacity MM Lbs.	
<u>With Captive Styrene</u>			
Dow Chemical	Allyns Point, Conn. Midland, Mich. Torrance, Calif.	350	
Monsanto	Addyston, Ohio Long Beach, Calif. Springfield, Mass.	250	
Koppers	Kobuta, Pa.	150	
Foster Grant	Leominster, Mass. Peru, Ill.	140	
Carbide	Bound Brook, N. J. Marietta, Ohio	80	
Rexall Drug & Chemical*	Holyoke, Mass. Santa Ana, Calif.	60	
Cosden	Big Springs, Tex.	40	
Shell	Wallingford, Conn.	<u>30</u>	<u>%</u>
	Subtotal	1100	86
<u>Styrene Purchasers</u>			
Brand Plastics	Medina, Ohio Torrance, Calif. Willow Springs, Ill.	58	
Solar Chemical	Leominster, Mass.	30	
Catalin Corporation	Galumet City, Ill.	20	
Massachusetts Plastics	Iudlow, Mass.	17	
Ticonderoga Chemical	Leominster, Mass.	15	
Richardson	Norwalk, Conn.	10	
Gordon Chemical	Worcester, Mass.	10	
Plastic Materials	Hicksville, N. Y.	5	
Others		<u>15</u>	
	Subtotal	<u>180</u>	<u>14</u>
	TOTAL	1280	100

\* Considered captive because of special relationship with El Paso Natural Gas.

TABLE IV

BRAND'S FACILITIES AND DEBT AS OF JANUARY 1, 1964

			Capacity, Millions of Pounds Per Year		
	<u>Debt*</u>	<u>Completion Date</u>	<u>General Purpose</u>	<u>Impact</u>	<u>Total Capacity</u>
<u>Willow Springs Illinois</u>					
MC Line	\$ 750,000	Jun., 1961	7.5		7.5
MB Line		Oct., 1961	7.5		7.5
MA Line		Feb., 1963	7.5		7.5
MD Line		Feb., 1962		4.0	4.0
ME Line		Dec., 1962		<u>6.0</u>	<u>6.0</u>
			<u>22.5</u>	10.0	32.5
<u>Torrance California</u>					
WA Line	\$ 350,000	Nov., 1962	7.5		7.5
WB Line		Nov., 1962		<u>6.0</u>	<u>6.0</u>
			<u>7.5</u>	6.0	13.5
<u>Medina Ohio</u>					
OA Line	\$ 350,000	Dec., 1963		12.0	12.0
	<u>\$1,450,000</u>		<u>30.0</u>	<u>28.0</u>	<u>58.0</u>

\* Loans by Standard/Amoco to establish operations (fixed and working capital). All except \$125,000 at Torrance are 5-yr., 5 $\frac{1}{4}$ % secured by mortgages on properties, plant, and equipment and a pledge of common stock and personal guarantees of the stockholders. The \$125,000 is a six-month unsecured promissory note at 5% due after proposed acquisition date of April 1, 1964.

TABLE V

BRAND'S END USE PATTERN FOR GENERAL PURPOSE  
POLYSTYRENE COMPARED TO TOTAL U.S. MARKET

	Willow Springs Sales Fiscal 1963		Estimated End Use Breakdown of Total U.S. Market, %
	<u>MM lbs.</u>	<u>%</u>	
Resellers & Recompounders	3.8	28	
Housewares	2.5	19	4
Wall Tile	1.6	12	7
Packaging	1.5	11	27
Toys & Novelties	0.6	5	9
Foam			15
Lighting Fixtures & Signs			5
Unknown	3.1	25	
All Other	<u>      </u>	<u>      </u>	<u>33</u>
	13.1	100	100

TABLE VI

BRAND'S END USE PATTERN FOR IMPACT  
POLYSTYRENE COMPARED TO TOTAL U.S. MARKET

	Willow Springs Sales Fiscal 1963		Estimated End Use Breakdown of Total U.S. Market, %
	<u>MM Lbs.</u>	<u>%</u>	
Resellers & Recompounders	1.5	33	
Housewares	1.2	27	7
Toys	0.6	13	16
Packaging	0.3	7	11
Unknown	0.8	20	
Refrigeration			22
Radio, TV Appliances			10
Toilet Seats			4
All Other			<u>30</u>
	<u>4.4</u>	<u>100</u>	100



TABLE VII  
BALANCE SHEET  
BRAND PLASTICS CO.  
ASSETS

	<u>June 30</u> <u>1963</u>	<u>June 30</u> <u>1962</u>
<b>CURRENT ASSETS</b>		
Cash	\$ 86,470.30	\$ 39,108.2
Trade accounts receivable, less allowance for doubtful accounts (1963 - \$25,000.00; 1962 - \$6,500.00)	541,979.36	318,510.1
Inventories - at the lower of cost (first-in, first-out method) or market:		
Finished products	\$ 449,258.00	\$ 101,793.7
Raw materials	72,410.03	49,022.0
Manufacturing supplies	5,540.51	4,813.0
	\$ 527,208.54	\$ 155,628.8
Prepaid insurance and expenses	14,207.37	12,793.9
<b>TOTAL CURRENT ASSETS</b>	<b>\$1,169,865.57</b>	<b>\$ 526,041.3</b>
<b>PROPERTY, PLANT, AND EQUIPMENT - on the basis of cost - Note A:</b>		
Land and improvements	\$ 104,790.28	\$ 73,526.0
Building	326,739.35	185,192.9
Machinery and equipment	733,351.17	395,039.8
	\$1,164,880.80	\$ 653,758.8
Less allowances for depreciation	99,548.64	43,839.6
	\$1,065,332.16	\$ 609,919.2
Land (1963 - \$23,413.91; 1962 - \$26,934.55) and construction in progress (1963 - Ohio plant; 1962 - California plant)	51,321.58	41,226.7
	\$1,116,653.74	\$ 651,145.9
<b>OTHER ASSETS</b>		
Organization expenses, less amortization	\$ 1,510.60	2,158.1
Advances to employees	1,100.00	450.0
	\$ 2,610.60	\$ 2,608.1
	<u>\$2,289,129.91</u>	<u>\$1,179,794.1</u>

See notes to financial statements.

TABLE VIII  
BALANCE SHEET  
BRAND PLASTICS CO.  
LIABILITIES AND STOCKHOLDERS' EQUITY

	<u>June 30</u> <u>1963</u>	<u>June 30</u> <u>1962</u>
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$1,080,324.46	\$ 392,279.44
Accrued wages and commissions	6,349.78	1,415.73
Payroll taxes and taxes withheld from employees	7,602.44	3,736.13
Real estate and personal property taxes	7,650.00	-0-
Accrued interest	25,506.33	44,836.43
Federal and state income taxes - estimated - Note B	<u>39,800.00</u>	<u>-0-</u>
<b>TOTAL CURRENT LIABILITIES</b>	<b>\$1,167,233.01</b>	<b>\$ 442,267.73</b>
<b>RESERVE FOR DEFERRED FEDERAL INCOME TAX - Note C</b>	<b>30,000.00</b>	<b>-0-</b>
<b>LONG-TERM DEBT - Note A</b>		
Notes payable, 5 1/4%, due in equal semiannual installments of \$97,500.00 from January 1, 1965, to July 1, 1969.	975,000.00	750,000.00
<b>STOCKHOLDERS' EQUITY</b>		
Common Stock, par value \$100.00 a share - authorized and outstanding 500 shares	\$ 50,000.00	\$ 50,000.00
Retained earnings (deficit*) - Note A	<u>66,896.90</u>	<u>62,472.88*</u>
<b>TOTAL STOCKHOLDERS' EQUITY (DEFICIENCY*)</b>	<b>\$ 116,896.90</b>	<b>\$ 12,472.88*</b>
	 <u><u>\$2,289,129.91</u></u>	 <u><u>\$1,179,794.85</u></u>

TABLE IX

STATEMENT OF INCOME AND RETAINED EARNINGS  
BRAND PLASTICS CO.

	Year Ended June 30	
	1963	1962
Net sales	\$3,161,659.46	\$1,644,143.47
Cost of products sold	<u>2,657,141.43</u>	<u>1,469,139.25</u>
	\$ 504,518.03	\$ 175,004.22
Selling, administrative, and general expenses	\$ 232,998.21	\$ 108,162.51
Interest on long-term debt	47,702.15	36,006.21
Loss on abandonment of equipment	<u>16,847.89</u>	<u>-0-</u>
	\$ 297,548.25	\$ 144,168.72
INCOME BEFORE INCOME TAXES	\$ 206,969.78	\$ 30,835.50
Provision for federal and state income taxes (including \$30,000.00 for deferred federal income tax) - estimated - Notes B and C	<u>69,900.00</u>	<u>-0-</u>
NET INCOME FOR THE YEAR	\$ 137,069.78	\$ 30,835.50
Retained-earnings deficit at beginning of year	<u>62,472.88</u>	<u>93,308.38</u>
	\$ 74,596.90	62,472.88*
Dividends paid - \$15.40 a share	<u>7,700.00</u>	<u>-0-</u>
RETAINED EARNINGS (DEFICIT*) AT END OF YEAR	<u>66,896.90</u>	<u>62,472.88*</u>
Provision for depreciation included in costs and expenses	\$ 58,727.00	\$ 35,805.26

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS  
BRAND PLASTICS CO.,  
JUNE 30, 1963

Note A - Long-Term Debt:

Notes payable are secured by mortgages on property, plant, and equipment and a pledge of the Common Stock and personal guarantees of the two stockholders. Among other restrictions, the loan agreement provides that the Company may not pay dividends in excess of 25% of any year's net income or reacquire its Common Stock. The total cost of the initial phase of the Ohio plant is expected to be \$270,000.00, and mortgage financing has been arranged.

Note B - Federal Income Tax:

The provision for federal income tax for the year ended June 30, 1963, was reduced by approximately \$27,000.00 by the application of a loss carry-forward from the year ended June 30, 1961.

Note C - Deferred Federal Income Tax:

Provisions for depreciation charged to income for financial accounting purposes for the year ended June 30, 1963, were determined on a basis consistent with that of prior years; however, commencing with that year, for income tax purposes the Company has deducted additional depreciation resulting from the use of accelerated depreciation methods as permitted by the Internal Revenue Code and redetermination of estimated useful lives of certain equipment based upon guideline rules issued by the Internal Revenue Service. A provision of \$15,000.00 was charged to income for deferred federal income tax which may be payable in future years.

The total reduction in federal income tax payable for the year ended June 30, 1963, resulting from the investment credit under the Revenue Act of 1962 was \$28,000.00. Of this amount, \$13,000.00 (48%) was applied to reduce the provision for federal income tax and \$15,000 was credited to the reserve for deferred federal income tax.

TABLE X

PROJECTED CONSOLIDATED BALANCE SHEET - MARCH 31, 1964  
BRAND PLASTICS CO.  
ASSETS

---

CURRENT ASSETS

Cash on hand and in banks		\$ 191,300
Trade accounts receivable (net)		617,000
Inventories		
Finished products	\$ 411,300	
Raw materials	113,400	
Manufacturing supplies	9,600	
Total inventories		534,300
Prepaid insurance and expenses		25,800
		<hr/>
TOTAL CURRENT ASSETS		\$1,368,400

FIXED ASSETS

Willow Springs		
Land, improvements, buildings	\$ 334,500	
Machinery, equipment, furniture	508,600	
Total Willow Springs		\$ 843,100
Torrance		
Land, improvements, buildings	\$ 97,300	
Machinery, equipment, furniture	235,400	
Total Torrance		\$ 332,700
Medina		
Land, improvements, buildings	\$ 204,800	
Machinery, equipment, furniture	120,100	
Total Medina		\$ 324,900
Less allowances for depreciation (all locations)		-165,100
		<hr/>
TOTAL FIXED ASSETS		\$1,335,600

OTHER ASSETS

Organization expenses, less amortization	\$ 1,000	
Advances to employees	1,100	
		<hr/>
TOTAL OTHER ASSETS		\$ 2,100
		<hr/>
TOTAL ASSETS		\$2,706,100
		<hr/>

TABLE XI

PROJECTED CONSOLIDATED BALANCE SHEET - MARCH 31, 1964  
 BRAND PLASTICS CO.  
LIABILITIES AND STOCKHOLDER'S EQUITY

CURRENT LIABILITIES

Accounts payable	\$1,094,200
Accrued taxes payable	22,400
Accrued commissions	3,300
Accrued insurance	800
Accrued interest payable	42,800
Federal income tax	<u>10,800</u>

## TOTAL CURRENT LIABILITIES

\$1,174,300

LONG-TERM DEBT

1,450,000

RESERVE FOR DEFERRED INCOME TAX

30,000

NET WORTH

Capital stock	\$ 50,000
Retained earnings	67,400
Subtotal	<u>\$ 117,400</u>
Loss, nine months ended 3/31/64	<u>-65,600</u>

## NET WORTH

\$ 51,800

## TOTAL LIABILITIES AND NET WORTH

\$2,706,100  
=====

TABLE XII

PROJECTED CONSOLIDATED OPERATING STATEMENT  
 BRAND PLASTICS CO.  
NINE MONTHS ENDED MARCH 31, 1964

Net sales, 25.5 million pounds	\$2,877,900	
Cost of products sold	<u>-2,654,500</u>	
		\$ 223,400
Selling, administrative, and general expenses	\$ 248,200	
Interest on long-term debt	<u>40,800</u>	
		<u>\$ 289,000</u>
INCOME <sup>1/</sup> BEFORE INCOME TAXES <sup>2/</sup> (LOSS)		(\$ 65,600)

1/ Income excluding depreciation allowances (\$67,500)  
 estimated at \$1,900.

2/ Brand is due refund of 1963 federal taxes (\$37,250)  
 and will have \$20,325 unused investment credit  
 carry forward.

TABLE XIII

BRAND PLASTICS COMPANY  
CAPITAL INVESTMENTS  
Production Capacity: 58 MM Lb./Yr.

Purchase of Brand Plastic's Capital Stock  
Acquisition Price

Value of Stock Exchange	\$ 250,000
Long-Term Debt (Amoco Loans to Brand)	1,450,000
Net Effective Acquisition Cost	<u>\$1,700,000</u>

Assets Acquired

Fixed Assets (3 Plants)	
Land	\$ 108,500
Facilities, Undepreciated Value <sup>1/</sup>	1,125,000
Total Fixed Assets	<u>\$1,233,500</u>

Working Capital	
Current Assets	\$1,368,400
Less Current Liabilities	<u>-1,163,500</u>
Net Working Capital	\$ 205,900

Other Assets	
Organization Amortization	\$ 1,000
Advances to Employees	1,100
Refund Due on 1963 Income Taxes <sup>2/</sup>	37,250
Unused Investment Credit <sup>3/</sup>	20,325
Total Other Assets	<u>\$ 59,675</u>

Going Concern Value <sup>4/</sup>	200,925
Total Assets Acquired	<u>\$1,700,000</u>

Capital Investment - Future Operations

	Annual Sales	
	1964, Forecast 36 MM Lb./Yr.	1965, Forecast 50 MM Lb./Yr.
Acquisition Price	\$1,700,000	\$1,700,000
Contingency for Modifications	0	350,000
Working Capital, Net Increase	350,000	550,000
Total Investment <sup>5/</sup>	<u>\$2,050,000</u>	<u>\$2,600,000</u>

- NOTES: <sup>1/</sup> Tax book basis  
<sup>2/</sup> Resulting from loss during 9 months ending March 31, 1964  
<sup>3/</sup> From Torrance and Medina plants  
<sup>4/</sup> By difference  
<sup>5/</sup> Does not include \$20,000 per year provided in economics for sustaining capital



TABLE XIV

BRAND PLASTICS COMPANY  
ANNUAL NET SALES AND TOTAL EXPENSES

	Forecast 1964 Sales Position <u>1/</u>		Forecast 1965 Sales Position <u>2/</u>	
	<u>M\$/Year</u>	<u>¢/Lb.</u>	<u>M\$/Year</u>	<u>¢/Lb.</u>
<b>NET SALES</b>				
General Purpose Polystyrene	2,640	<u>3/</u>	3,240	<u>5/</u>
Impact Polystyrene	2,100	<u>4/</u>	3,450	<u>6/</u>
Net Sales	4,740	13.17	6,690	13.38
<b>EXPENSES, TYPICAL YEAR (1965)</b>				
Raw Materials				
Styrene Monomer @ 9.25¢/lb. <u>1/</u>	3,129	8.69	4,313	8.63
SBR Rubber @ 23.0¢/lb.	194	0.54	319	0.64
Lubricant @ 10.0¢/lb.	141	0.39	208	0.42
Additives	53	0.15	86	0.17
Total Raw Materials	3,517	9.77	4,926	9.86
Processing Costs				
Nitrogen	36	0.10	50	0.10
Utilities	90	0.25	126	0.25
Containers	72	0.20	100	0.20
Labor and Benefits	294	0.82	294	0.59
Other Processing Costs	146	0.40	146	0.29
Total Processing Costs	638	1.77	716	1.43
Sales and Administrative Expense				
Brand Plastics Normal	300	0.83	300	0.60
Amoco Contribution	50	0.14	100	0.20
Total Sales and Administrative	350	0.97	400	0.80
Depreciation, Normal (15 Years) <u>8/</u>	93	0.26	116	0.23
Total Expenses	4,598	12.77	6,158	12.32

NOTES: 1/ 36 MM Lb./Yr. Sales; 60/40 General Purpose/Impact Mix  
2/ 50 MM Lb./Yr. Sales; 55/45 General Purpose/Impact Mix  
3/ 22 MM Lb./Yr. General Purpose At 12.0¢/Lb. Netback  
4/ 14 MM Lb./Yr. Impact At 15.0¢/Lb. Netback  
5/ 27 MM Lb./Yr. General Purpose At 12.0¢/Lb. Netback  
6/ 23 MM Lb./Yr. Impact At 15.0¢/Lb. Netback  
7/ Netback Of 8.75¢/Lb. Texas City (24 P.I. On Pro-Rata Share Of Monomer Plant)  
This Netback Chosen Because It Is Same As Used In Previous Representations  
Made To Managements Of Amoco And Standard Relative To The Monomer Project  
8/ Facilities At Original Cost Of \$1,393,000 Plus Contingency For Modifications

TABLE XV

BRAND PLASTICS COMPANY  
SUMMARY ECONOMICS  
Production Capacity: 58 MM Lb./Yr.  
Monomer Price: 9.25¢/Lb., Divd.

	Forecast 1964 Sales 36 MM Lb./Yr. Avg. Netback-13.2¢/Lb.	Forecast 1965 Sales 50 MM Lb./Yr. Avg. Netback-13.4¢/Lb.
<u>INVESTMENT, M\$</u>		
Acquisition Price	1,700	1,700
Contingency for Modifications	0	350
Working Capital, Net Increase	350	550
Total Investment	2,050	2,600
<u>PROFIT AND CASH RETURN, M\$/YEAR</u>		
Net Sales	4,740	6,690
Expenses Other Than Depreciation	- 4,505	- 6,042
Depreciation	- 93	- 116
Profit Before Tax	142	532
50% Income Tax (Assumes New Rate)	- 71	- 266
Net Profit After Tax	71	266
Cash Return	164	382
<u>PROJECT ECONOMICS</u>		
Net Profit After Tax		
% of Total Investment	3.5	10.2
% of Net Sales	1.5	4.0
Cash Return		
% of Total Investment	8.0	14.7
% of Net Sales	3.5	5.7
Break-even Point, % of Capacity	30.0	28.0
Payout, Years	15.0	5.0
<u>PROFITABILITY INDEX</u>		
Brand (as acquisition)	5.0	13.5
Monomer Plant	24.1	24.1
Integrated Operation <u>1/</u>	16.8	20.5

NOTE: 1/ PI of integrated operation depends only on polymer netback; it is independent of monomer transfer value. In above cases monomer prices, at which PI on all segments is equal, are 8.1 and 8.6¢/lb., respectively.

BPACC00447

TABLE XVI

BRAND PLASTICS COMPANY  
PROFITABILITY INDEX SENSITIVITIES<sup>1/</sup>  
 PRODUCTION CAPACITY: 58 MM Lb./YR.

	Forecast 1964	Forecast 1965
	Sales	Sales
	36 MM Lb./Yr.	50 MM Lb./Yr.
	Avg. Netback-	Avg. Netback-
	13.2¢/Lb.	13.2¢/Lb.
<u>PROJECT BASE P.I., Monomer at 9.25¢/Lb. Dlv'd.</u> <sup>2/</sup>	5.0	13.5
<u>P.I. SENSITIVITIES, Δ P.I.</u>		
<u>Sales</u>		
0.10¢/Lb. Change in Average Netback	+1.2	+1.1
1 MM Lb./Yr. Change in General Purpose Sales	+0.7	+0.5
1 MM Lb./Yr. Change in Impact Sales	+1.3	+0.9
Increase Sales to Capacity, 58 MM Lb./Yr.	+14.0	+5.5
<u>Investment</u>		
\$100,000 Change in Modification Contingency	+0.3	+0.5
\$10,000/Year Change in Sustaining Capital	+0.3	+0.3
10% Change in Working Capital	+0.2	+0.5
<u>Raw Materials</u>		
0.10¢/Lb. Change in Monomer Transfer Price	+1.1	+1.0
10% Change in Price of All Other Raw Materials	+1.3	+1.3
<u>Processing Cost</u>		
10% Change in Cost	+2.4	+1.7
<u>Sales and Administrative Expense</u>		
\$50,000/Year Change	+1.8	+1.2
<u>Project Life</u>		
Reduce from 20 to 15 Years	-0.4	-0.7
Reduce from 20 to 10 Years	-1.5	-3.4

- <sup>1/</sup> P.I. Sensitivities are centered at Project P.I. and are not necessarily additive.  
<sup>2/</sup> Equivalent to 8.75¢/Lb. monomer netback used in styrene monomer project which yields a 24 P.I. on the pro-rata share of the monomer plant.

BPACC00448

FIG. 1

BRAND - SALES BY LOCATION

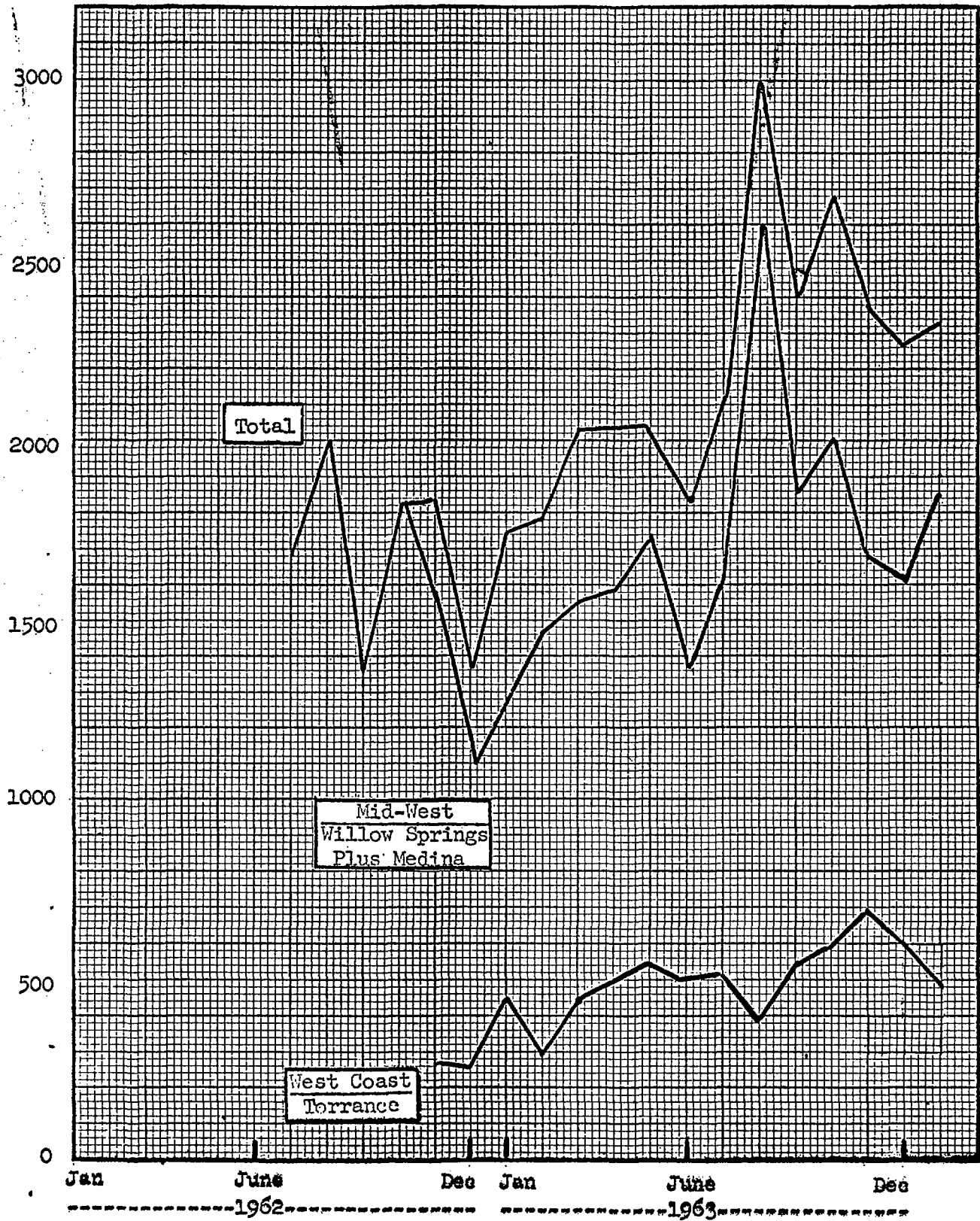


FIG. 2

BRAND - SALES BY PRODUCT TYPE

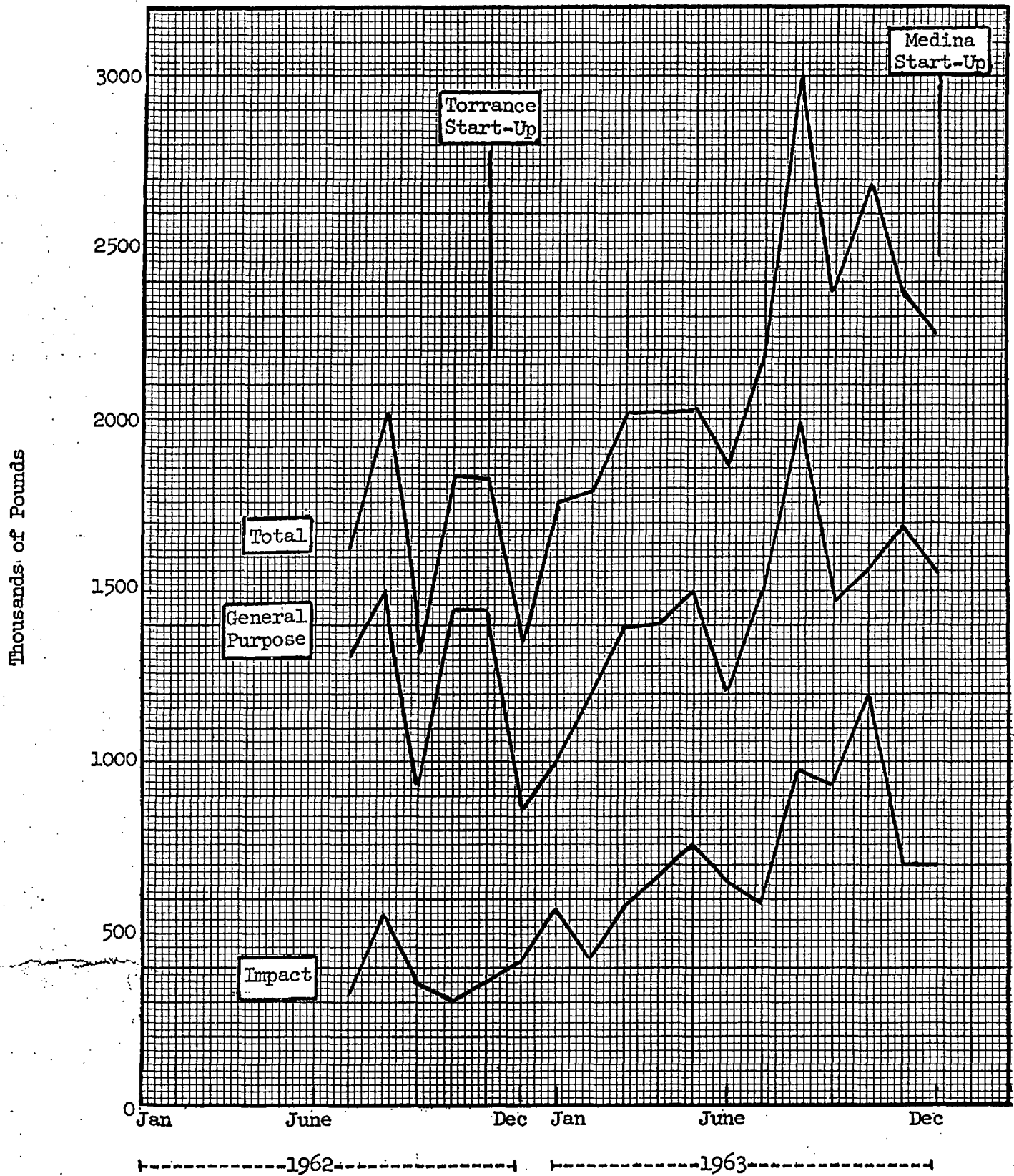
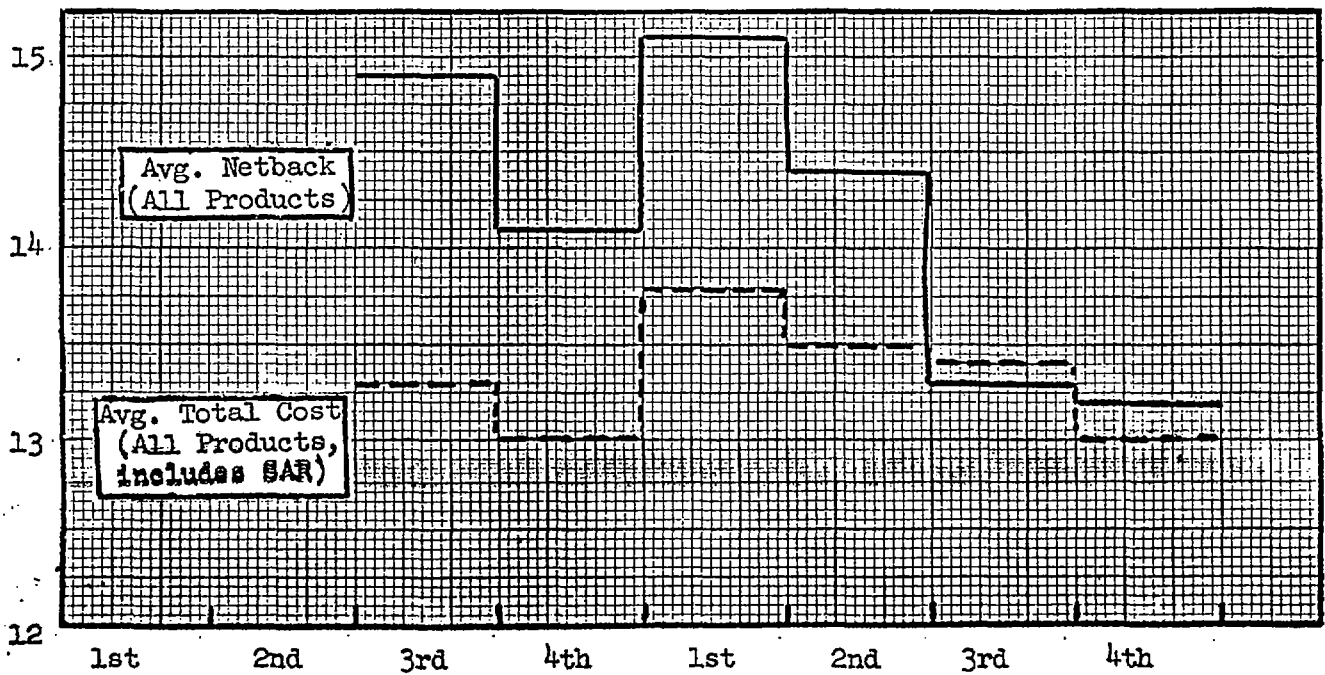
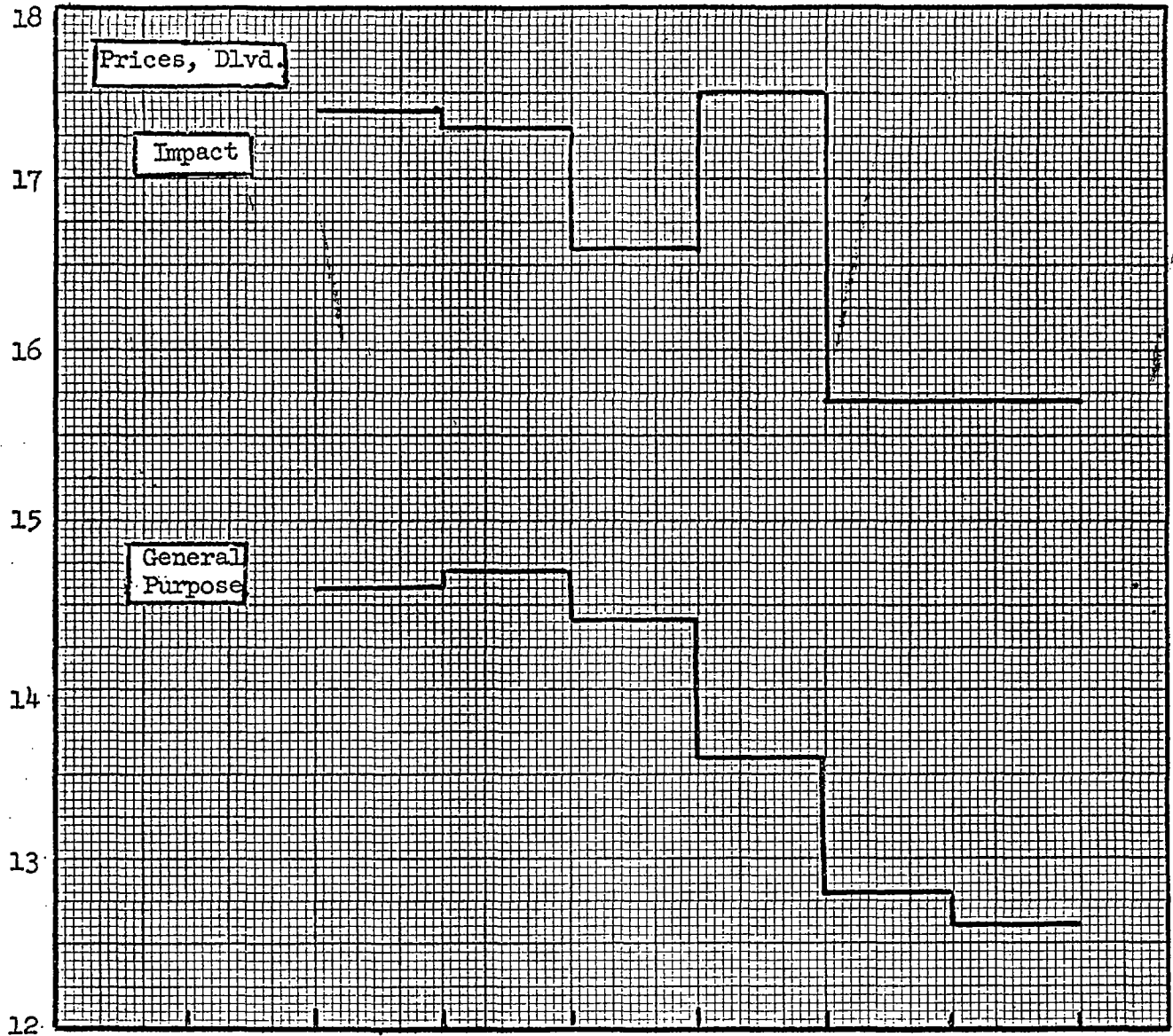


FIG. 3

BRAND QUARTERLY PRICE, NETBACK AND COST HISTORY

Cents Per Pound



DBA 0000151

FIG. 4

PROFITABILITY OF BRAND ACQUISITION  
 BASED ON FORECAST 1964 SALES AND PRODUCT MIX  
 36 million pounds/yr.; 60/40 gen'l. purp./impact  
 No capital investments for equipment and/or process modification

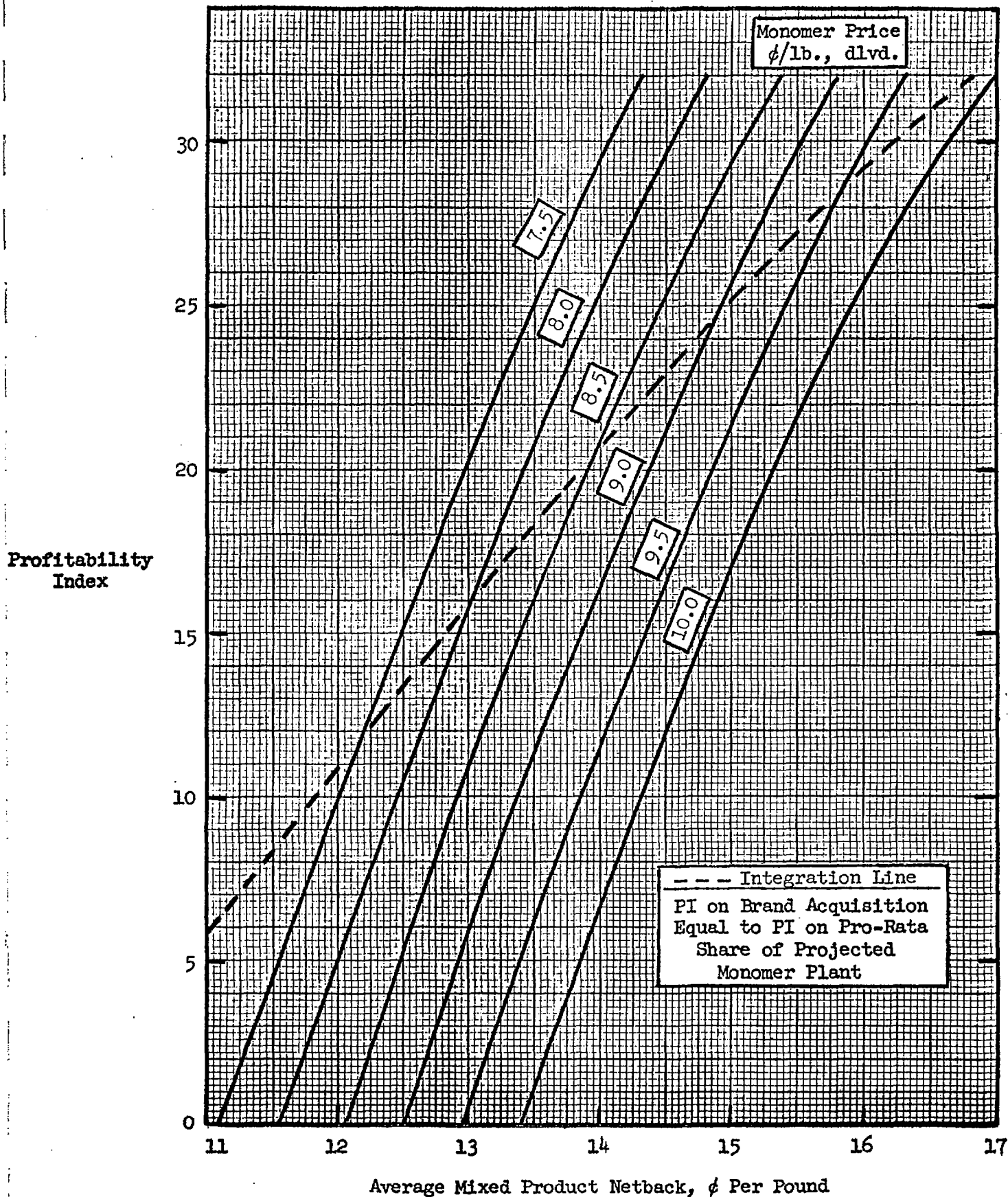
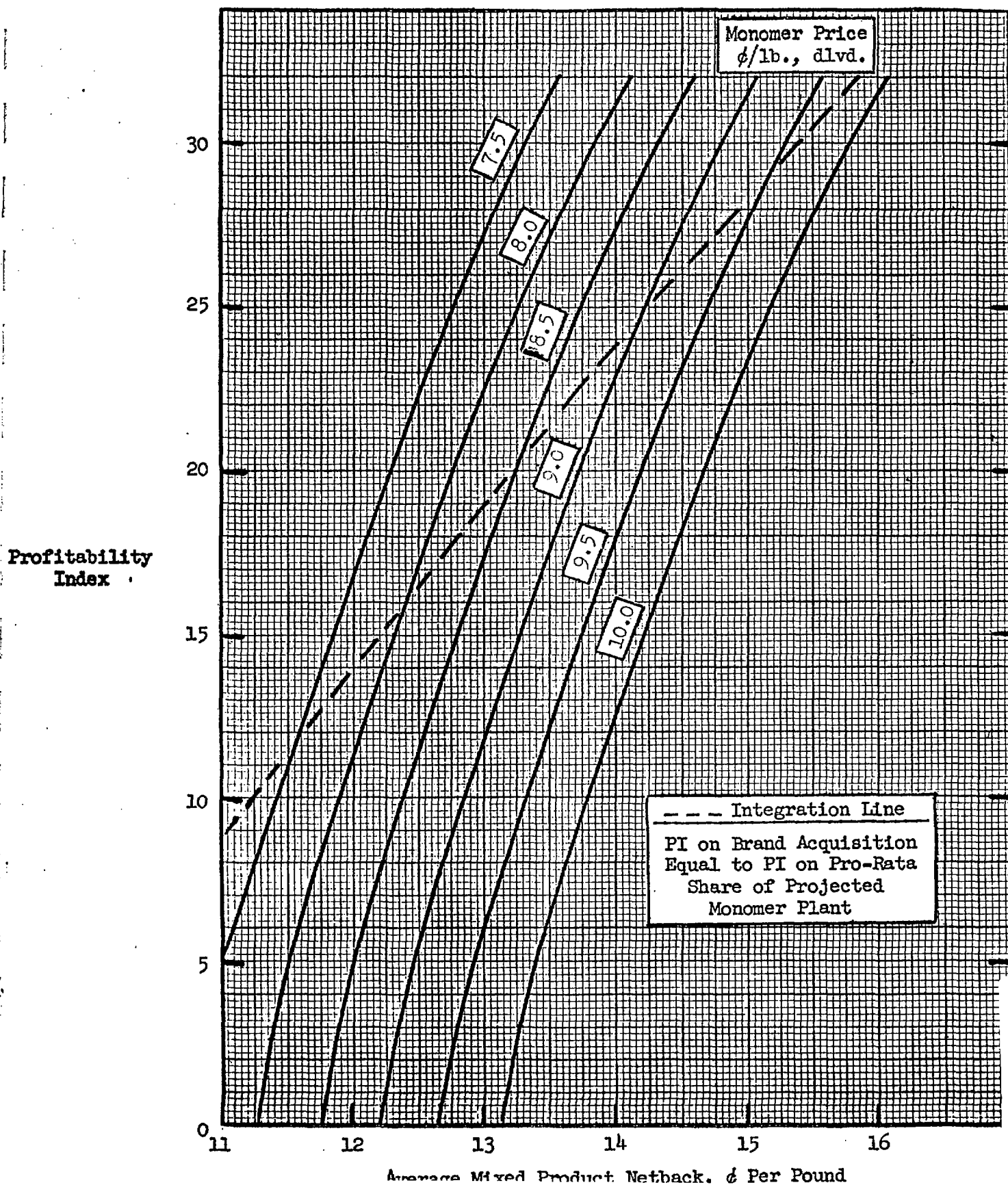




FIG. 5

PROFITABILITY OF BRAND ACQUISITION  
 BASED ON FORECAST 1965 SALES AND PRODUCT MIX  
 50 million pounds/yr.; 50/50 gen'l. purp./impact  
 \$350,000 capital investments for equipment and/or process modification





A P P E N D I X    A

Summaries of Reports by:

DeBell and Richardson, Inc.

Amoco Technical Service Laboratory

Amoco Plastics Research, Inc.

A. D. Little, Inc.

REPORT ON  
EVALUATION OF BRAND  
POLYSTYRENE RESINS

FOR  
AMOCO CHEMICALS CORPORATION  
CHICAGO, ILLINOIS

Project No. 384.11

BY

DeBELL & RICHARDSON, INC.  
HAZARDVILLE, CONNECTICUT

BY: Herbert S. Schnitzer  
Herbert S. Schnitzer

Richard S. DeBell  
Richard S. DeBell

BPACC00455

X2C3, WB-116) developed less yellow color than the other commercial samples (Carbide TMD-6000, TGD-6000, TMD-9020 #2, and Foster Grant 324), and flexibility of all the samples appeared to be about the same after three hours of heating.

8. Resistance to UV light. Impact polystyrenes are not suited for outdoor exposure, since they turn yellow and become brittle under such exposure even when stabilized with antioxidants. The purpose of this test, then, as in the case of the crystal polystyrenes was not to check suitability for exposure to UV light, but to look for differences in rates of yellowing. Test bars were exposed on a turntable under an RS-4 sunlamp for seven days, and we found no differences in the rates of yellowing of the samples tested (Carbide TMD-6000, Brand M2C3, ME-150, Brand H2C3, ME-106, Brand H2C3, WB-111, Brand XXP1, WB-120, and Brand X2C3, WB-116).

### CONCLUSIONS

The tests we have run indicate that the Brand crystal polystyrenes, as a group, have the desirable characteristics of low residual styrene monomer, good stress cracking resistance, good flexural fatigue resistance, high melt index, good flexural strength, modulus and deflection at break, good color and clarity, good deflection temperature, and adequate resistance to UV light. On the minus side, we found relatively high volatiles and odor in the general purpose grades, and a relatively low deflection temperature for the so-called "high heat resistant" R1P3 sample. We would expect that the Brand crystal polystyrenes would be well suited for the molding of such articles as wall tile, toys and housewares, and probably, for extrusion foam, but would not be suited for food packaging (because of odor), lighting fixtures and extrusion of double oriented film. The Brand materials are probably suited for about 75% of the applications for crystal polystyrene, on a weight basis.

The Brand impact polystyrenes, as a group, have low rubber content by our test, poor tensile elongation, spotty drop rod impact resistance, low deflection temperature and fair to poor color, which are not balanced by good oxidation resistance, adequate resistance to UV light and high melt index. We would expect that the Brand impact polystyrenes are sold principally for injection molding of such articles as toys and housewares where there are no material or end use specifications. Most or all of the sheet extrusion and thermoforming applications for packages, refrigerators, etc., are probably closed to Brand impact materials because their quality is inadequate for these applications. We believe that the Brand impacts can compete for only a small share, perhaps 25% of the total impact market, and this percentage may drop in the future as users become more sophisticated. We note also that the Brand line does not now include "extra high" or "super high" impact materials, which we expect will find wide usage in the future in high-volume packaging applications.

AMOCO CHEMICALS CORPORATION  
TECHNICAL SERVICE LABORATORY

EVALUATION OF BRAND PLASTICS' POLYSTYRENES

CONCLUSIONS

General Purpose Polystyrene

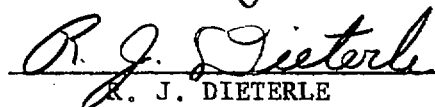
1. The tensile and flexural properties of the Brand material was equivalent to five of the seven commercial materials evaluated.
2. In color determinations, Brand's best (lightest) batches fall in the middle of the range of commercial comparators. The poorest (yellowest and darkest) of Brand's material fall considerably below commercial materials.
3. Overall, the quality of Brand's prime general purpose polystyrene is deemed to be essentially competitive with commercial comparators.

Impact Polystyrene

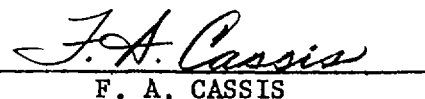
1. Although the tensile strength of the Brand material was only slightly poorer, its elongation properties were two to three-fold poorer than most commercial materials.
2. Recent evaluations have shown that the length of time that the polymer is held in the post reactor hold tank prior to being extruded and pelletized has a definite bearing on properties. Samples of polymer taken from the initial run of a batch have better color and up to twice the elongation properties of samples taken later.
3. Molded samples of Brand's material exhibit extreme dimensional change after exposure in an oven for two hours at 160°F. The commercial control, Dow 475, did not exhibit detectable changes after this heat aging test. Brand materials deformed a minimum of 5% and a maximum of 15% in elongation.
4. Brand materials had Izod impact properties equivalent to all commercial samples tested. Typical values were between 1.5 - 2.0 ft/lbs.

JFM-RJD/dl  
2/14/64

  
J. F. MAYER

  
R. J. DIETERLE

Approved by:

  
F. A. CASSIS

BPACC00457

# AMOCO PLASTICS RESEARCH INCORPORATED

15, CHIDORI-CHO, KAWASAKI-SHI, JAPAN  
TELEPHONE KAWASAKI 0444-3503

## TECHNICAL REPORT NO. 2

### EVALUATION OF BRAND POLYSTYRENE

P. E. Schmidt  
R. W. Myerholts

January 16, 1964

#### ABSTRACT

Brand general purpose and impact grades have been evaluated by basic property tests and applications work including injection molding, sheet extrusion and vacuum forming. The general purpose grade, while showing some color variation between lots and slightly poorer flow than competition is considered to be a good commercial polymer which has remained rather consistent over the past two years. The impact grade has good impact strength while the very high impact and the medium impact grades show no advantage, impact-wise, over the impact and general purpose grades respectively. All of the various impact grades suffer from poor color, odor, high volatiles content, low heat distortion temperature, low elongation, low ultimate tensile strength and poor dispersion of the rubber phase. Brand does not have a grade suitable for extrusion and vacuum forming. At the same price, a molder would undoubtedly select one of the competitive materials in preference to Brand's impact grades.

cc: G. H. Weisemann  
P. E. Schmidt  
R. W. Myerholts  
APR Circulate

W. E. Kennel  
K. C. Peterson  
N. Stein

G. Rieger  
R. D. Sieron  
F. A. Cassie

Proprietary - To Be Maintained in Confidence

BPACC00458

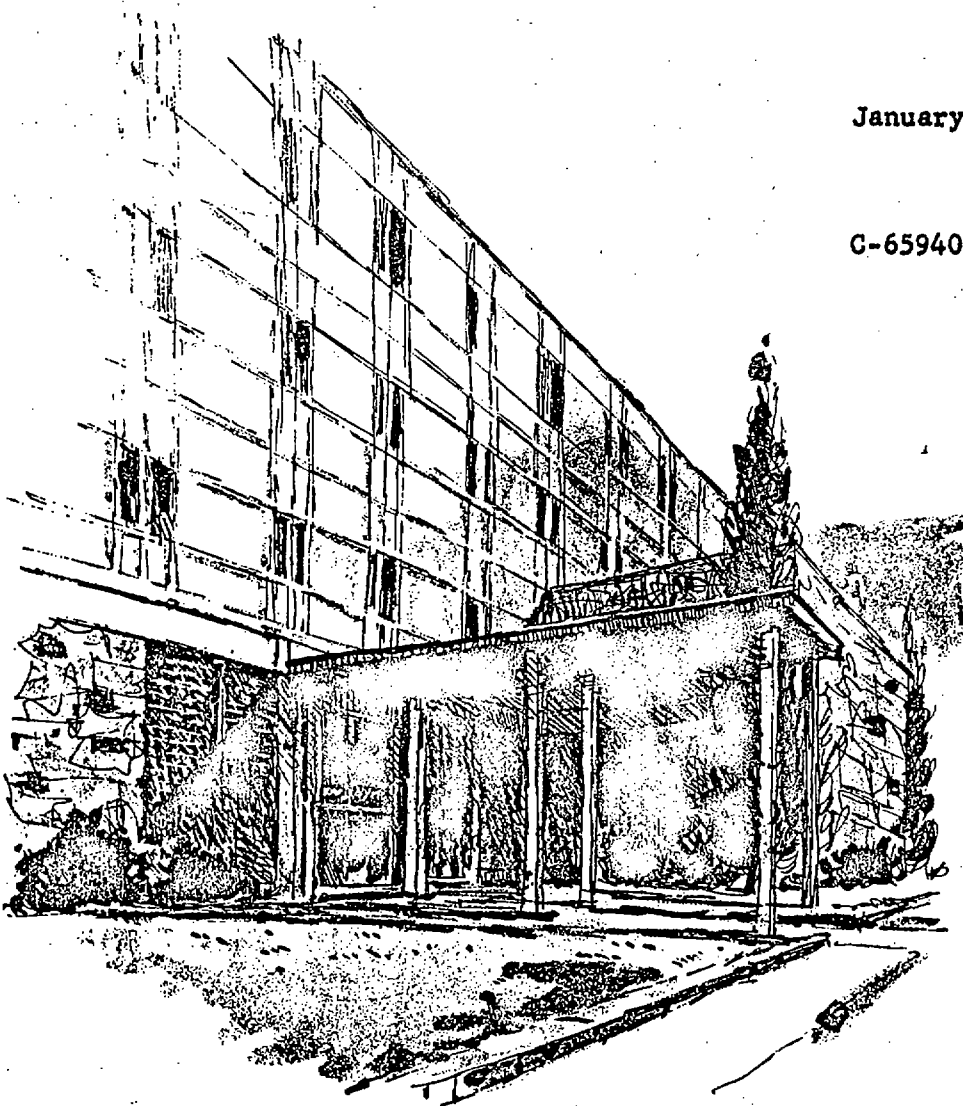
EVALUATION OF BRAND PLASTICS COMPANY

Report to

Amoco Chemicals Corporation

January 1964

C-65940



Arthur D. Little, Inc.

BPACC00459

## II. SUMMARY

It is our conclusion that there is a growing market for polystyrene over the near and long term future. Polystyrene promises to be one of the lowest cost and largest volume plastic materials of the next decade; it has, for example, an excellent chance to displace important volumes of paper in packaging applications. There also appears to be a substantial opportunity for the manufacture of upgraded copolymers of polystyrene such as ABS, which are expected to continue to make important inroads in industrial applications at premium prices. Brand Plastics appears from our investigation to have the opportunity to participate in these markets, and is well located with regard to the future growth of the industry, which is now geographically centered in the Midwest, where prices are higher than in the older marketing areas such as New England. Assuming that Brand can develop qualified high impact grades, it is in an excellent position to share in that market.

Our examination convinces us that Brand Plastics has done an outstandingly good job over the past several years in achieving an annual sales volume of 36 million lbs., in the face of entrenched competition from Dow, Monsanto, Koppers, Carbide and others which had an established marketing franchise. In addition to facing established reputable competition, Brand has had to face competition from secondary distribution channels such as resellers, compounders, and others who have been offering off grade materials and distressed products at low prices. In our discussions throughout the industry, we have been told by all concerned of the

excellent background and knowledge of the two major individuals in the company, Mr. Macurdy and Mr. Curtis. These men are respected in the industry for their competence, know-how, and merchandising ability.

Brand's market franchise is primarily with the small consumers of non-specification grade general purpose and impact polystyrene. Brand resins are not specified by end consumers, and where end consumers do specify a certain type of resin, Brand's material can not be freely substituted. It is fair to say that much of Brand's present business was obtained on a price basis, a personal service basis, and a credit basis. Since Brand does no secondary selling to the end users such as the automotive companies, their materials are not and will not be specified. Furthermore, since Brand does not provide color matched compounds, they do not have any entree to the specified color market. To a large extent, Brand has been serving those smaller customers who, because of limited credit and non-critical applications, must obtain material at the lowest price and at the best terms. It is not likely that Brand can advance its position unaided.

It should also be noted that Brand has built up its business at a time when the major producers were not meeting price, and were willing to allow smaller producers such as Brand to obtain business on a price basis. In the last six months this trend has notably reversed, and the major producers are meeting every price concession given by the smaller producers. Brand has done very well in comparison with the other smaller producers such as Solar, Ticonderoga, PMI, Richardson, etc.



The quality of Brand polystyrene appears to be just good enough for the applications for which it is sold. It is not of sufficiently good quality to be used in the critical, specification type end uses. The resin is made by a ~~continuous~~ process which, while difficult to control results in nonuniformity, could if properly engineered produce a material of highly uniform quality. By virtue of the process, however, the resin will probably remain a relatively "easy flow" material. In most cases, Brand customers do not test the material received from Brand, and Brand does not test the material when it leaves the factory. The only quality check is whether or not the material performs satisfactorily in the customer's plant considering the price he paid for it.

Brand can provide a service to many of its customers by virtue of its flexibility; its salesmen can make on-the-spot decisions on both price and credit, and the company can deliver material on very short notice in comparison with the somewhat cumbersome operations of Dow, Koppers and Monsanto. The Brand salesmen know exactly what price they can charge and what chances they have of collecting the bill. A number of customers contacted told us that they will always give Brand a portion of their business because of its ability to provide this type of instant credit and instant delivery.

We believe that the development of a satisfactory uniform impact grade will improve the profits of the Brand operation, since these materials can be sold at a premium. This premium, however, probably will tend to diminish over the years. There remains the possibility that with the assistance of Amoco, Brand could develop an ABS type material which would

command an even higher premium. It is our opinion that acquisition by Amoco will bring some trade relation benefits to Brand, and will allow them to participate in the specification market providing the quality of their material is satisfactory. It is probable that if any volume of business can be developed in this area, Brand will have to install color compounding facilities.

The major disadvantage of Brand is that the industry is presently in substantial overcapacity particularly on the West Coast, and hence prices and profit margins are not likely to improve in the near term. Absorption of general overhead expenses typical of Standard of Indiana may prove too great a burden. Much of Brand's past growth has been due to its ability to underprice major competitors, particularly in the Midwest, where there has been little intense price competition. Due to the present commitment by the major producers to meet price, Brand's growth will probably not be as fast in the future as it has been in the past. Foster Grant which has erected a new plant in Peru, Illinois, Solar which is now marketing in the Midwest, and Catalin which will open up its 20 million lb. a year plant at Calumet City will bring increasing competitive pressures on the Midwest market. Another difficulty with the Brand operation is the fact that many of its customers are of the least desirable type in terms of credit, slow payment and limited growth prospects. It is very unlikely that Brand's present customers will be able to expand their business as rapidly as Brand is expanding its capacity.

The major advantage that we see to the acquisition of Brand by Amoco is that it serves as a captive source of styrene monomer, and that it provides a nucleus upon which Amoco could build a considerably more substantial business. Probably the single greatest asset of Brand is the capabilities of Macurdy and Curtis. The fact that both of these men are well known to you will ease the problem of amalgamation.

A P P E N D I X    B

Opinions of Lyon & Lyon and  
American's Patent & Licensing Depart-  
ment on risk of violating proprietary  
rights of others through acquisition  
of Brand.

FREDERICK S. LYON (1873-1948)  
LEONARD S. LYON  
LEWIS E. LYON  
REGINALD E. CAUGHEY  
CHARLES G. LYON  
LEONARD S. LYON, JR.  
JOHN B. YOUNG  
RICHARD E. LYON  
EARL L. MARTIN  
R. DOUGLAS LYON  
ROLAND N. SMOOT  
LLOYD SPENCER  
FRANK E. MAURITZ  
CONRAD R. SOLUM, JR.  
JAMES W. GERIAK  
ROBERT M. TAYLOR, JR.

LAW OFFICES  
**LYON & LYON**  
PATENTS AND TRADEMARKS  
811 WEST SEVENTH STREET  
LOS ANGELES 90017

TELEPHONE  
MADISON 4-3901

December 2, 1963

Mr. Grant A. Brown  
General Counsel  
Amoco Chemicals Corporation  
130 East Randolph Drive  
Chicago 1, Illinois

BRAND PLASTICS

Dear Mr. Brown:

Pursuant to your instructions and with the excellent cooperation of Messrs. Sieron, Gilkes and Medhurst of your organization, we have completed our study of the Brand Plastics situation and are prepared to render our opinion.

As background, you will recall that in 1960, under the direction of Mr. Richard J. Farrell, we undertook to review certain legal aspects of the organizing of Brand Plastics in view of the then employment of Dr. McCurdy and Mr. Curtis by Rexall Drug & Chemical Company, the acquisition by Rexall of Granada, a polystyrene manufacturing company previously operated by McCurdy and Curtis, and the early employment of McCurdy and Curtis by Dow Chemical Company. In this study our concern was possible misappropriation of trade secrets or confidential information by Brand, both as respected the proprietary rights of Rexall and as respected the proprietary rights of Dow.

Reference to my letter to Mr. Farrell dated September 2, 1960 will demonstrate it to have been our opinion that no unreasonable trade secret or confidential information appropriation risks attended the proposed organization and activation of Brand Plastics. At the same time, we recommended that an advisory letter be prepared and forwarded to McCurdy and Curtis in order that inadvertent encroachment

BPACC00466

Mr. Grant A. Brown  
Page 2  
December 2, 1963

upon the rights of either Rexall or Dow might not occur at a subsequent time. Such a letter was duly prepared and dispatched to the gentlemen in question on December 1, 1960, Mr. Arthur G. Gilkes receiving copies of both the September 2 and December 1 letters. In addition, a tentative opinion regarding Amos et al Patent No. 2,694,692 was sent to Mr. Gilkes under date of September 23, 1960.

As we understand our current instructions, you request an opinion in the nature of a follow-up to the earlier opinion in light of the fact that Brand is now operating plants in Torrance and in Willow Springs and is constructing a new plant in Medina. We further understand that acquisition of the stock of Brand Plastics by your company is under consideration.

We have reviewed the various data regarding operations at Torrance and Willow Springs and regarding the proposed plant at Medina; and, in close cooperation with Dr. McCurdy himself, have compared same with the Rexall and Dow practices as previously known to McCurdy and Curtis, including, of course, the Granada operation. Based on this work, it is our opinion that the advices in our letter of December 1, 1960 to McCurdy and Curtis have been followed in all substantial respects, and that the operations of Brand at Torrance and Willow Springs and as proposed at Medina involve no appropriation of any of the trade secrets or confidential information of either Rexall or Dow. This conclusion is subject to minor qualification, as will be apparent below. Since polystyrene manufacture consists in the production of two types of copolymer, namely, general purpose and high impact, these have been separately treated.

#### GENERAL PURPOSE

So far as Dow is concerned, the sole trade secret problem is confined to the particular gear pumps used in current Brand operations, these being the same type gear pumps previously used at Rexall and at Granada and which were developed by Dow. Over the years Dow has made no objection to the use of the gear pumps by Granada, by Rexall or by Brand, although it is possible that the Dow people are not aware of such use. In any event, were Dow to raise an issue as respects their use, it would be a relatively simple matter to change to other type pumps.

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Mr. Grant A. Brown  
Page 3  
December 2, 1963

Since the gear pumps were developed by Dow, Rexall could lay claim to no proprietary interest in any of their features. With the exception of the gear pumps, all other aspects of the Brand general purpose polystyrene manufacture appear to be either in the public domain or independently conceived after McCurdy and Curtis left Rexall.

#### HIGH IMPACT

So far as high impact polystyrene manufacture is concerned, the same type gear pumps are used by Brand and consequently the same problem is present. There is, however, nothing peculiar to the high impact process which would prevent change to other type pumps if necessary. Aside from this, there appears to be nothing by way of trade secret appropriation that Dow could assert. On the other hand, Rexall might possibly claim that the use of agitation in a batch process by Brand constitutes a misuse of a Rexall trade secret, agitation in a batch process, as such, not having been used at Dow, but having been used at Rexall when McCurdy and Curtis were there. Such an expedient in polystyrene manufacture, however, appears old and well-known as evidenced by prior Patents Nos. 2,606,163 and 2,694,692 to Morris et al and Amos et al, respectively, and for this reason we do not consider that any such Rexall claim would be sound. All other aspects of the Brand high impact polystyrene manufacture appear to be either in the public domain or to have been developed after McCurdy and Curtis left Rexall.

#### PATENTS

In addition to considering trade secrets and confidential information problems, you have asked that we give attention to possible infringement by Brand of the Amos et al Patent No. 2,694,692 referred to above and Wehr et al Patent No. 2,619,478. Both patents are owned by Dow, the former dealing with a particular type of agitation and the latter dealing with a particular type of internal lubricant.

As to the Amos et al Patent No. 2,694,692, it is our opinion that the type of agitation practised by Brand is a different type agitation than is the subject of the Amos et al patent and that, if valid at all, the patent would not be construed to cover anything done by Brand.

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Mr. Grant A. Brown  
Page 4  
December 2, 1963

As to the Wehr et al Patent No. 2,619,478, the question of validity and infringement is much closer. Since, however, Dow has offered licenses under the patent on what appear to be not excessive royalty terms, we see no reason to be apprehensive but rather feel that in the event Dow determines to enforce the patent a license could readily be obtained under it.

We thus have concluded that insofar as Dow and Rexall trade secrets, confidential information and the two patents brought to our attention are concerned, no substantial impediment stands in the way of acquisition of the Brand stock by Amoco. In this, we have also gone over the matter of marketing practices of Brand with yourself directing particular attention to whether any exposure based on secret customer lists, customer requirements and the like, is present. Again, based on the information we have, we are of the opinion that Brand is in the clear.

If, after review and consideration of this letter and opinion, you wish amplification in any particular respect, please do not hesitate to request the same.

Yours very truly,



LSLJr/ib

BPACC00469





# AMERICAN OIL COMPANY

GENERAL OFFICE 910 SOUTH MICHIGAN AVENUE CHICAGO 80, ILLINOIS

Area Code 312  
Telephone: 431-5950  
Cable: AMOCO, CHICAGO

RESEARCH AND DEVELOPMENT DEPARTMENT

PIKE H. SULLIVAN  
*Manager, Patents and Licensing*

February 13, 1964

Mr. Grant A. Brown  
Amoco Chemicals Corporation  
Prudential Building  
Chicago 1, Illinois

Dear Grant:

RE: BRAND PLASTICS

As you know, our department has been following the Brand Plastics situation from the standpoint of whether acquisition of Brand, as contemplated by Amoco's Loan and Supply Agreement with Brand, might involve possible violation of proprietary rights of others, and more particularly, Dow and Rexall.

You will recall, we cooperated with Mr. Leonard S. Lyon, Jr. in 1960 in an initial study of the situation at the time Amoco was entering into the aforesaid Loan and Supply Agreement. More recently, we have worked with Mr. Lyon in a thorough, de novo investigation of the entire situation. In this connection, we have carefully reviewed the designs and operating practices for Brand's production facilities in the light of the published and patented art relating to production of polystyrene. We have cooperated with Mr. Lyon by providing him with all of the factual material available to us as well as the results of our investigations, in order to assist him in formulation of his opinion. At the same time, we have developed an appropriate basis for independent judgment.

In our opinion, neither Rexall nor Dow would have any proper basis for asserting misappropriation of trade secrets or other proprietary information by either of Messrs. McCurdy and Curtis, by Brand Plastics, or by any assignee of McCurdy and Curtis or Brand. In our view, McCurdy and Curtis have employed no more than the personal skill, knowledge and experience that they were entitled to employ; the technical information they have used has been drawn from the public domain; and the same has not used or been based upon trade secrets of either Rexall or Dow. In this conclusion, we

are in complete agreement with Mr. Lyon's opinion as set out in his letter to you of December 2, 1963. We would like, however, to amplify his opinion in one respect. The gear pumps referred to on page 2 of the opinion have, in our view, been placed in the public domain by Dow by means of an article in "Industrial and Engineering Chemistry" (December, 1955 - page 2440), which describes use of such pumps, and their significant design features, for handling viscous plastic materials.

We have also investigated the patent situation; since we have considered this in greater breadth than has Mr. Lyon, we will set out our views in somewhat greater detail. Our view of the patent situation is based upon extensive searching of the prior art, with particular reference to the unexpired U.S. patent art. Although the latter is very active and extensive in scope, most of the patent activity concerns either continuous-type mass or suspension-type processes for producing polystyrene, formulation of improved product compositions and novel product applications. Since Brand's operations are based upon the mass batch type of process, we have found very few unexpired patents which appear relevant to the present operations.

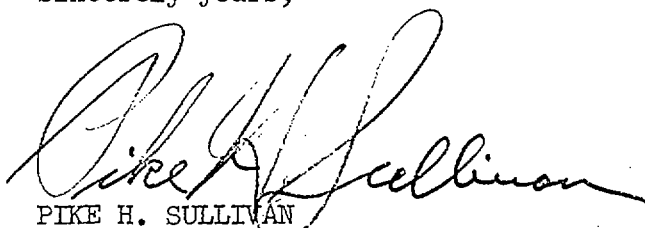
We found it necessary to give special consideration to only three unexpired patents, all assigned at the time of issue to Dow. The most significant of these patents is the Amos et al. patent 2,694,692 which has been referred to in Mr. Lyon's opinion. This patent contains claims which purport, by the breadth of their language, to control use of a "shearing" type agitation during polymerization for production of high impact polystyrene. The use of agitation, at least in the early stages of copolymerization of styrene and rubber, is important to prevent undue cross-linking and gel formation. The use of agitation during polymerization of styrene to make general purpose product had been disclosed prior to the above Amos et al. patent. Moreover, Dow's own Morris and Griess patent U.S. 2,606,163, having a filing date twenty months earlier than that of the Amos et al. patent, teaches the value of agitation during polymerization to make high impact polystyrene. Hence, the patent is of doubtful validity. In order to avoid anticipation by Morris and Griess, Dow would have to establish that Amos et al. actually made their invention earlier, or would have to contend that the Amos et al. patent is concerned with a different type of "shearing" agitation. A reasonable interpretation of the Amos et al. patent, in the light of its prosecution history in the Patent Office, is that it covers only high speed agitation at constant RPM intended to break down or abrade molecular structures and agglomerates, as distinct from mere mixing of reactants to facilitate inter-reaction without cross-linking. So interpreted, Brand's use of agitation to prevent cross-linking does not infringe the Amos et al. patent.

February 13, 1964

The remaining two patents we have considered are Dow's Wehr et al. No. 2,619,478 and Amos et al., No. 2,714,101. The former concerns use of a white oil of a particular viscosity range as an internal lubricant in polystyrene production. Brand is able to avoid infringement by use of either a white oil or a petrolatum outside the viscosity range specified by the patent. Also, as mentioned in Mr. Lyon's letter, Dow has offered licenses under its patent to the trade on reasonable terms. The latter patent to Amos et al. is concerned with fairly elaborate reactor instrumentation which is not employed by Brand.

Accordingly, we feel that Brand's operations as currently practiced are free of any substantial risk of infringement based on any valid claim of an unexpired U.S. patent. You will appreciate, however, that any changes in operations would require further review in view of the closeness of the patent art and the high degree of patent activity in the field.

Sincerely yours,



PIKE H. SULLIVAN

cc: Messrs. A. G. Gilkes  
E. L. d'Ouville  
R. C. Arnold/A. H. Bransky  
R. C. Medhurst

George Rieger  
R. D. Sieron

BPACC00472

A P P E N D I X C

Brand Plastics Company -- organization;  
benefit plans; labor relations

Estimated cost of installing Amoco's  
benefit plan program in Brand Plastics

BRAND PLASTICS COMPANY  
ORGANIZATION - BENEFIT PLANS - LABOR RELATIONS

A study has been made of the organizational structure, benefit plan program, and labor relations situation in Brand Plastics. These three areas are discussed in this memorandum and evaluated in terms of the various problems which will be encountered if this company acquires Brand Plastics. This study was based on information furnished by R. L. Curtis.

ORGANIZATIONAL STRUCTURE

Attached to this memorandum is a chart which shows the functional responsibilities of Brand Plastics personnel. McCurdy and Curtis share over-all responsibility for the entire operation of Brand.

Although the information received is not totally complete, it is sufficiently adequate to indicate that these positions could be fitted into Amoco's salary and position structure without serious difficulty. This matter, of course, will require further consideration and study when the ultimate organizational structure after acquisition is finally resolved.

Obviously organizational realignment will be necessary and it should be recognized that this may create personnel problems.

BENEFIT PLAN PROGRAM

Brand Plastics' entire benefit plan program consists of group life insurance, a basic hospital plan, and a major medical plan. The last mentioned plan provides the same type of coverage as our extended medical expense plan. This program is insured with Occidental Life Insurance Company of California and is applicable company-wide at the present time.

A flat amount of group life insurance - \$3,000 - is carried on each employee. The basic hospital plan is quite similar to the basic plan in effect in our General Office. In some respects, the Brand plan is more liberal; in others, our plan has the advantage. The major medical plan pays 80% of covered expenses whereas our plan pays 75%.

Brand Plastics pays the entire cost of this program for employees and in addition pays \$2.75 per month toward the cost of hospital plan coverage for an employee's dependent. It costs the company \$11.00 a month for an employee with family coverage and \$8.25 for an employee without family coverage. The employee pays \$15.01 a month for family coverage. The costs given are those applicable to Willow Springs, but are reported to be fairly representative of the over-all situation.

Under the Plastic Workers' contract at Willow Springs, represented employees will drop out of the company program on September 15, 1964, and thereafter be covered under a union program of employee health and welfare benefits. This program consists of Blue Cross and Blue Shield coverage and does not provide any life insurance. The union program will cost the company \$7.00 per month for each employee and starting September 16, 1965, an additional \$4.00 per month will be paid toward the cost of family coverage. The employee pays the remaining cost of family coverage. It is interesting to note that the company cost under this program is the same as the company cost under the present program at Willow Springs.

Mr. Curtis advised that salaried employees at Willow Springs including company officers will also enroll in the union administered plan.

There is \$1,800,000 insurance on the lives of each Curtis and McGurdy with Brand as beneficiary (a provision required by Amoco's Loan and Supply Agreement).

Under the ICWU contract at Torrance, the company agrees to maintain the existing level of contributions to the health and welfare benefits of employees, subject to the policy requirements of the insurance carrier. This provision presumably obligates the company to keep the present program in effect except, of course, for any changes required by the insurance underwriter.

Aside from the above, Brand Plastics has no other formal benefit plans.

Considered solely from the standpoint of costs, it would be desirable to keep Brand employees from participating in the Amoco benefit plan program. This, however, is not feasible as a long-range program because some critical tax and personnel problems will arise.

Brand Plastics could be operated as a subsidiary with its present benefit plans and no tax problem would arise unless employees were transferred from Amoco to Brand. One or two employees could be temporarily loaned to Brand and continue to participate in our benefit plans, but this arrangement could not be continued for more than a couple of years. Personnel problems, however, would still arise as key salaried employees in Brand became aware that they were second class citizens. The inevitable consequences would be turnover and replacement difficulties. For these reasons, it would be advisable at the outset to place Brand's salaried and non-represented hourly employees in the Amoco benefit plan program.

Hourly represented employees would be continued under the contractually committed plans until the present contracts expire and then the Amoco benefit plan program could be used to full advantage in the ensuing negotiations. To comply with tax regulations, it is necessary that these employees be given the opportunity to participate in the qualified plans - retirement and savings - and including these plans in negotiations would presumably satisfy this requirement.

## LABOR RELATIONS

### Willow Springs

At Willow Springs, Brand Plastics has executed a three year contract, expiring on September 15, 1966, with the Plastic Workers Union, Local 18, AFL-CIO. The contract will be automatically renewed for one year periods thereafter unless 60 day prior written notice is given by either party.

The Plastic's Union is affiliated with the Amalgamated Doll & Toy Workers Union of the United States. It represents employees in a number of small companies in the Chicago area which are engaged in making plastic end-products. In this respect, the activities carried on by Brand Plastics, of course, are quite different.

The contract contains some unusually favorable provisions from a management viewpoint. Included among them are an unqualified right to subcontract any or all of the operations in the plant, definite limitations on the subject matter and the scope of arbitration, and a waiver of the right to bargain on any subjects covered, or not covered, by the agreement.

There are, however, certain provisions in the contract which are not compatible with the policy and practice we have been following. These are the following:

- a. Union Shop.
- b. A payment by the company into a Trust Fund for employee health and welfare benefits.
- c. Vacations according to the following schedule:
  - 6 months but less than 9 months seniority - 24 hours pay
  - 9 months but less than one year seniority - 32 hours pay
  - 1 year but less than 2 years seniority - 1 week
  - 2 years but less than 5 years seniority - 2 weeks
  - 5 years or more - 3 weeks
- d. A shift differential of 9¢ and 18¢ effective September 16, 1965. (Presently 8¢ and 16¢).
- e. A premium of 10¢ per hour effective September 16, 1965, for shift employees for all work performed on Saturday or Sunday.

With the exception of the union shop, the other items listed above are within the realm of negotiations and items (b), (c), and (e) would seem to be susceptible to change if such a course were considered desirable.

The contract provides for 30 day, 6 month, and one year steps on a minimum wage scale progression which will become effective on September 16, 1964. The hourly rate after one year is given below:

Leadman	\$2.78
Data Taker	2.48
Bagger	2.18
Maintenance	3.00
Maintenance Helper	2.48
Janitor	2.05

Effective September 16, 1965, each hourly employee will receive a 5¢ per hour increase.

The Leadman, Data Taker, and Bagger handle all normal production operations, -- receiving of raw materials, loading of reactors, control of polymerization schedules, extrusion, pelletizing, bagging and warehousing of finished product. In addition, they operate the necessary equipment having to do with polymer production. This involves the oil heaters for the heat transfer medium used to control polymerization, the air cooled heat exchangers for cooling the heat transfer medium, flow of nitrogen to blanket the polymer units, air compressors for supply of air pressure and minor maintenance to insure continued operation.

The crew consists of four men. The Leadman in addition to over-all responsibility while on duty, loads reactors, and sets and controls polymerization conditions. A second man normally observes operating conditions by means of various gauges, meters, etc., and works as needed in any phase of the operation, including loading of reactors, extrusion, etc. The third and fourth men on the crew are normally responsible to the crew leader for work assignment but mainly work on extrusion and bagging of materials and keeping the work area in satisfactory condition.

It is reported that Brand Plastics is high on the wage scale when compared with the other companies represented by the Plastics Workers Union. There is no discernible wage pattern among these companies, however, and a precise determination cannot be made as to any given number of cents per hour by which Brand exceeds those companies. It, of course, is recognized that the other companies represented by the Plastics Workers Union are not engaged in the same type of operation that Brand is.

Considered on the basis of the work performed, the rates paid by Brand seem to be on the low side. Moreover, the work in question will inevitably be compared to certain jobs in our Joliet plant. At the present time an Operator after 24 months in Joliet receives \$3.41 per hour and a mechanic



receives \$3.41 after 48 months. The Loader which presumably would be comparable to the Bagger receives \$3.01.

It is admitted by Brand that difficulty is being experienced in getting employees at current rates as they are considerably lower than the rates paid by the other employers in Willow Springs and vicinity. This competitive situation in itself could force higher rates on the Willow Springs operation and it is equally possible that union pressures in the future may be exerted to bring those rates more nearly in line with the rates paid in our Joliet plant.

#### Torrance, California

At this location, Brand Plastics has executed a contract with the International Chemical Workers Union, Local 1, AFL-CIO, for a two year period. The contract expires August 14, 1965, and provides automatic yearly renewals unless 60 day prior written notice is given.

This contract is not quite as favorable as the Willow Springs contract from a management standpoint but by and large is not a bad contract. It also contains certain features which are not compatible with the policy and practices we have been following. These are:

- a. Employees can refuse to cross picket lines sanctioned by the California Federation of Labor.
- b. Plant-wide seniority is followed in layoffs which could present a problem in the maintenance area.
- c. A shift differential of 9¢ and 18¢ per hour effective October 14, 1964. (presently 8¢ and 16¢).
- d. Vacations according to the following schedule:

One year of employment - 1 week

Two years of employment - 2 weeks

Five years of employment - 3 weeks

The contract provides for 45 day, 6 month, and one year steps on a wage progression. The hourly rate after one year is given below:

Operator I	\$2.50
Operator II	2.35
Handy Man	2.20
Maintenance Man	2.75

On October 14, 1964, each one of the above rates will be increased by 8¢ per hour.

At Torrance the basic crew consists of two men to handle the over-all production activities. The Handyman is on duty normally during day-time hours only and either he or the basic crew handle shipment of orders to customers and receipt of raw materials.

It is admitted that the rates in the Torrance area are approximately \$1.00 per hour low measured by Dow, Union Carbide, Rexall and Shell.

#### Medina, Ohio

No union has entered the picture yet at this location. The basic crew for plant operation will be two men with one handyman and one maintenance man. In this respect, the hourly staff is quite similar to Torrance. We have no information on hourly rates in that location.

#### SUMMARY

1. Brand Plastics' positions could be quite easily slotted into our salary and position structure. At an appropriate time, job descriptions should be prepared and a study made to resolve the organizational structure.
2. If Brand Plastics is acquired, the Amoco benefit plan program should be installed immediately, assuming the percentage participation requirements can be met, for salaried employees and non-represented hourly employees and then used as the quid pro quo in contract negotiations with represented employees. Accordingly, the cost of our benefit plan program should be used in the economic evaluation of Brand.
3. If Brand is to be operated as a subsidiary, the acquisition timetable should allow sufficient time for the installation of our benefit plan program.
4. The union contracts negotiated by Brand do not present any serious problems. The hourly rates in these contracts, however, are on the low side and this could become a real issue in the future if this company becomes identified as the owner of Brand. It is impossible to predict when or whether a situation would arise which would result in a substantial increase in these rates, but it would be unrealistic to use the present rates in the economic evaluation.

- R. L. BROWN -

Attachment

BPACC00479

BRAND PLASTICS COMPANY ORGANIZATION CHART - JANUARY 1, 1964

Dr. J. Lloyd McCurdy, President  
Mr. Robert L. Curtis, Sec.-Treasurer  
Mr. R. A. Wallace, Operations Superintendent

<u>Willow Springs, Ill., Plant</u>	<u>Torrance, Calif., Plant</u>	<u>Medina, Ohio, Plant</u>
Mr. G. LaBounty, Sales & Admin. Mgr. Mr. O. Ray, Mgr., Operations & Maint. Mr. R. Ahlgren, Supervisor - Scheduling	Mr. S. Peters, Sales & Admin. Mgr. Mr. R. Bergerum, Mgr., Operations	Mr. J. A. Clark, Sales & Admin. Mgr. Mr. F. Zipperlen, Mgr., Operations
Salesmen 0 Accountants 2 Operators 18 Secretaries 2	Salesmen 0 Operators 9 Secretaries 1	Salesmen 2 Operators 8 Secretaries 1
Total Staff - 25	Total Staff - 15*	Total Staff - 13

\* Includes Messrs. McCurdy, Curtis and Wallace

Total Employees - 53

Note: Above consistent with basis for computation  
of cost of bringing Brand into Amoco's  
benefit plans.

ESTIMATED COST OF INSTALLING AMOCO'S  
BENEFIT PLAN PROGRAM IN BRAND PLASTICS

Cost estimates have been prepared by the Payroll Section on the basis of the following assumptions:

1. That the program would be installed April 1, 1964, for all salaried employees and for hourly employees at Medina with plan participation determined by employment dates.
2. That the program would be installed September 1, 1965, for hourly employees at Torrance and October 1, 1966, for hourly employees at Willow Springs and all employees would be eligible to participate on those dates. (The dates are the approximate dates of contract expirations in those locations).
3. That salaries and wages would remain unchanged.

These estimates for each plan are given below for the years -- 1964, 1965, 1966 and 1967 and the costs applicable to Messrs. McCurdy and Curtis are listed separately.

	<u>Group Life</u>	<u>Group Hospital</u>	<u>S&amp;D Plan</u>	<u>Vacation</u>	<u>Retirement</u>	<u>Savings</u>	<u>Grand Total</u>
1964	\$ 331	\$ 902	\$ 1,300	\$ 5,665	\$ 4,688	\$ 2,763	
McCurdy	42	44	291	1,173	1,179	633	
Curtis	36	44	223	898	1,116	485	
Total	\$ 409	\$ 990	\$ 1,814	\$ 7,736	\$ 6,983	\$ 3,881	\$21,813
1965	\$ 489	\$ 1,319	\$ 2,229	\$ 7,433	\$ 7,454	\$ 4,841	
McCurdy	56	58	388	1,173	1,682	844	
Curtis	48	58	298	898	1,598	646	
Total	\$ 593	\$ 1,435	\$ 2,915	\$ 9,504	\$10,734	\$ 6,331	\$31,512
1966	\$ 659	\$ 1,734	\$ 2,939	\$11,283	\$ 8,880	\$ 6,387	
McCurdy	56	58	388	1,173	1,785	844	
Curtis	48	58	298	898	1,692	646	
Total	\$ 763	\$ 1,850	\$ 3,625	\$13,354	\$12,357	\$ 7,877	\$39,826
1967	\$ 889	\$ 2,278	\$ 3,893	\$11,283	\$10,832	\$ 8,463	
McCurdy	56	58	398	1,173	1,887	844	
Curtis	48	58	298	898	1,790	646	
Total	\$ 993	\$ 2,394	\$ 4,579	\$13,354	\$14,509	\$ 9,953	\$45,782

While these estimates presumably reflect reasonably the over-all costs of the Amoco program, they overstate the costs which would actually be incurred. Brand Plastics has a hospital plan which we believe costs more than our plan and also has a vacation plan which for the years in question probably equals the cost of our plan. Also life insurance premiums on Curtis and McCurdy currently cost \$8,400 annually.

Eliminating Group Hospital, Vacation and \$8,400 Insurance on Curtis and McCurdy from the above results in the following costs:

1964 -	\$ 4,687
1965 -	\$12,173
1966 -	\$16,222
1967 -	\$21,634

There is another factor which will have a direct bearing on Company costs and that is turnover. The Company incurs virtually no cost under the retirement plan in cases of termination with less than 10 years of service. With such a small group it is difficult to estimate what the turnover might be and no further cost reduction is suggested for this reason.

In the case of McCurdy and Curtis, however, this may be quite important as their participation in retirement plan would be virtually cost free if they terminated in less than nine years. In fact, in these two cases, the only cost item of significance is the Savings Plan.

- R. L. Brown -

Revised 7/2/65  
Mr. Sedee

CONTRACT FOR CORPORATE REORGANIZATION

THIS AGREEMENT, made this 24<sup>th</sup> day of March, 1964 for the corporate reorganization of BRAND PLASTICS COMPANY, a Delaware corporation (hereinafter referred to as "Brand"), by and between all of the stockholders of BRAND PLASTICS COMPANY, namely J. L. McCURDY whose address is Palos Verdes Estates, California (hereinafter referred to as "McCurdy"), and R. L. CURTIS whose address is Arcadia, California (hereinafter referred to as "Curtis"), and STANDARD OIL COMPANY, an Indiana corporation whose principal office is located at 910 South Michigan Avenue, Chicago, Illinois (hereinafter referred to as "Standard"),

W I T N E S S E T H:

The parties hereto have agreed and do hereby agree to a reorganization of Brand, wherein and whereby all of the issued and outstanding capital stock of Brand will be exchanged solely for an agreed number of shares of the capital stock of Standard.

NOW, THEREFORE, in order to bring about said reorganization and said exchange of stock,

IT IS AGREED as follows:

1. On March 31, 1964 McCurdy and Curtis will deliver to Standard two stock certificates properly endorsed or accompanied by other proper assignments, representing a total of 500 shares of the capital stock of Brand. McCurdy and Curtis represent and warrant that 500 shares constitute all of the issued and outstanding capital stock of Brand. Federal transfer tax stamps, if required by law, shall be purchased and affixed to said certificates and cancelled by McCurdy and Curtis prior to delivery to Standard.

2. On March 31, 1964 Standard will deliver the following stock certificates of its capital stock:

<u>TO</u>	<u>CERTIFICATE OR CERTIFICATES FOR</u>
J. L. McCurdy .....	1969 shares
R. L. Curtis .....	1969 shares

Said certificates may, at the option of Standard, show as the owners thereof either McCurdy and Curtis individually as above set forth or Standard, provided, however, that if said certificates show Standard as the owner thereof, said certificates shall be properly endorsed, or be accompanied by other proper assignment, transferring legal title to McCurdy and Curtis. Federal transfer tax stamps, if required by law, shall be purchased and affixed to said certificates and cancelled by Standard, prior to delivery to McCurdy and Curtis. Should said certificates be in the name of Standard, McCurdy and Curtis shall not be required to pay any fees, taxes or transfer expenses as an incident to having said shares registered in their respective names.

3. McCurdy and Curtis agree, represent and warrant to Standard as follows:

A. Immediately subsequent to the date hereof, Brand shall permit agents or employees of Standard to examine the books and records of Brand and to audit said books and records in the manner and to the extent deemed necessary by Standard.

B. A balance sheet and audited financial statements of the Company as of January 31, 1964 have been prepared and certified by the Certified Public Accountants Ernst & Ernst, which are attached hereto marked Exhibit A and are a part of this Contract.

\* Removed by Mr. Soder 7/8/65.

The books, records and other information furnished to said accountants for the purpose of preparing said balance sheet are complete and accurate and faithfully disclose and represent the financial status of Brand as of the close of business on January 31, 1964. McCurdy and Curtis covenant and agree that they will indemnify and hold Standard harmless from and against any and all absolute or contingent liabilities not disclosed by said balance sheet, specifically excluding federal, state and local tax liability; provided, however, that any claim by Standard for such indemnification must be made prior to April 1, 1968.

C. Brand shall permit agents, employees and attorneys of Standard to examine the stock books, minute books, evidence of title to capital assets owned by Brand whether real or personal property, and other corporate records of Brand, in the manner and to the extent deemed necessary by Standard. Such examination of the title to said capital assets shall show, as of the date hereof, a merchantable title to said assets in Brand, free and clear of all liens and encumbrances, except:

(1) Real Estate and Chattel Mortgages from Brand as Mortgagor to Amoco Chemicals Corporation as Mortgagee dated January 20, 1961 and covering real and personal property owned by Brand located in Willow Springs, Illinois; Deed of Trust from Brand as Trustor to Amoco Chemicals Corporation as Beneficiary dated June 26, 1962 and Chattel Mortgage from Brand as Mortgagor to Amoco Chemicals Corporation as Mortgagee dated June 26, 1962, said Deed of Trust and Chattel Mortgage covering real and personal property owned by Brand in Torrance, California; Real Estate and Chattel Mortgages from Brand as Mortgagor to Amoco Chemicals Corporation as Mortgagee dated June 27, 1963 covering real and personal property owned by Brand in Medina, Ohio;



(2) Inchoate liens for ad valorem taxes for 1964 and thereafter;

(3) Restrictions, easements of record and visible easements, and minor defects which may be revealed by survey but which restrictions, easements and defects do not or will not materially interfere with the operation of the business being conducted on the respective premises;

(4) Planning and zoning ordinances.

D. That as of the date hereof there are no restrictions, easements of record, visible easements, or other defects to the title to the property of Brand that would interfere with the operation of the business being conducted on said property, and that Brand is not in violation of any planning or zoning regulation with respect to any of its property.

E. That Brand has full right and authority to use any and all processes, patent rights, technical information and know-how used by Brand in its manufacturing operations.

4. McCurdy and Curtis covenant and agree that Brand shall refrain, prior to the transfer of Brand stock to Standard pursuant to paragraph numbered 1 hereof, from selling, assigning, granting, conveying, encumbering, abandoning, or contracting to dispose of its right, title and interest in and to the use of the name "Brand" or any name, word, term, combination of names, or name confusingly similar to or derived from or signifying said name or any trade name or trademark or good will, now owned or used by Brand or in which Brand has any interest.

5. McCurdy and Curtis covenant and agree that subsequent to the date hereof and prior to the transfer of Brand stock to Standard pursuant to paragraph numbered 1 hereof,

A. Brand shall not increase the salaries of its officers or grant bonuses to its officers or declare dividends or other distributions on existing capital stock;

B. Brand shall not issue additional capital stock nor rights to acquire such stock; shall not issue bonds or other corporate securities nor rights to secure such bonds or securities; shall not mortgage, pledge, or encumber any of the assets of Brand; and shall maintain and keep in effect all property and public liability insurance, real estate title insurance, and all other insurance currently in effect;

C. Brand shall confine its operations and activities to such corporate transactions, and shall incur only such obligations, liabilities and indebtedness, as are necessary to the operation of Brand in the ordinary course of business;

D. McCurdy and Curtis, as officers and directors of Brand, shall continue to perform their respective managerial functions to the best of their respective abilities in order to further the normal business interests of Brand and for the purpose of conserving the assets and business of Brand and to preserve and maintain the records of the Company.

6. McCurdy and Curtis, as the sole stockholders of Brand and as members of its Board of Directors, agree to arrange for the proper call of such stockholders' or Board of Directors' meetings and the passage of such resolutions as may be necessary or convenient to enable Standard to acquire all of the issued and outstanding stock of Brand and to obtain control of Brand on March 31, 1964; and McCurdy and Curtis further agree to obtain the resignations of such of the officers and directors of Brand as Standard may direct and in such form as shall be designated by Standard.

7. McCurdy and Curtis warrant that Brand is a corporation duly organized, existing, and in good standing under the laws of the State of Delaware and qualified as a foreign corporation to do business and in good standing in the States of Illinois, Ohio and California; that the capital stock of Brand is duly issued, fully paid, and nonassessable; and that Brand has the corporate power to own its properties and to carry on its business as now being conducted.

8. Standard warrants that it is a corporation duly organized, existing, and in good standing under the laws of the State of Indiana, and that the common stock of said Company herein required to be delivered to McCurdy and Curtis by Standard in accordance with paragraph numbered 2 of this Contract is duly issued, fully paid and nonassessable, and is duly listed on the New York, Midwest, and Pacific Coast Stock Exchanges.

9. McCurdy and Curtis warrant that they are the owners of all of the issued and outstanding stock of Brand, that such stock is free from all liens and encumbrances, and that they will not sell nor voluntarily dispose of said stock prior to delivery thereof to Standard hereunder.

10. McCurdy and Curtis represent and warrant to Standard that except where Standard or Amoco Chemicals Corporation is a party, Brand has not and will not, prior to the transfer of Brand stock to Standard pursuant to paragraph numbered 1 hereof, enter into contracts or other commitments providing for the purchase or sale of materials or products extending beyond April 1, 1965, or enter into lease or rental agreements, either as lessor or lessee, the term of which extends beyond April 1, 1965.

11. The parties hereto agree that the close of business on March 31, 1964 shall be the date of acquisition for the purpose of the corporate reorganization of Brand and for the purpose of this Contract for Corporate Reorganization.

12. McCurdy and Curtis covenant and agree that they will, at any time or from time to time, individually and collectively, execute, acknowledge, and deliver to Standard all and every such further acts, deeds, assignments, transfers and assurances as reasonably may be required by Standard to complete the reorganization transaction of Brand as herein contemplated and provided.

13. McCurdy and Curtis covenant and agree, as the sole stockholders of Brand, to cooperate with and aid Standard in taking any and all actions necessary to or proper for the completion of the terms, conditions or intent of this Contract.

14. McCurdy and Curtis hereby individually and collectively represent and warrant that each is acquiring the shares of Standard capital stock herein required to be delivered by Standard, for the purpose of investment and not with the view toward the distribution thereof nor with the intention of offering the same for sale or of selling the same; provided, however, that nothing herein shall restrict the right of said McCurdy and Curtis to deal with said shares as the absolute owners thereof.

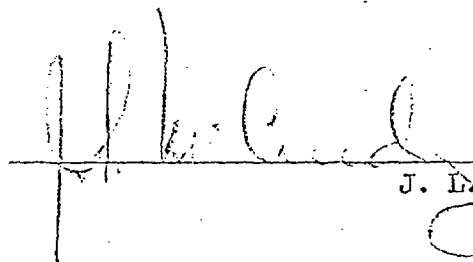
15. All representations, warranties and indemnifications made hereunder by McCurdy and Curtis shall survive the closing of this Contract.

16. All notices or other communications required to be given under the terms of this Contract, or any other notices or communications appropriate to or in furtherance of this transaction, shall be deemed to be properly served if delivered in writing personally or sent by certified mail to J. L. McCurdy and R. L. Curtis in care of Brand Plastics Company, 1225 West 196th Street,

Torrance, California, or to Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois, attention R. J. Farrell, General Counsel, unless and until a party to this Contract notifies the others of a different address for service of notice thereafter to said party. Date of service of a notice or communication served by mail shall be the date on which such notice or communication is deposited in a post office of the United States Post Office Department.

17. This Contract for Corporate Reorganization contains all the agreements and representations of the parties hereto, and no representation or promise not set forth herein shall affect the obligations of any party to the others as herein provided.

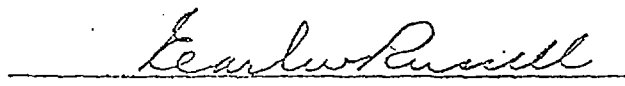
IN WITNESS WHEREOF, McCurdy and Curtis have hereunto set their hands and seals, and Standard has caused this instrument to be executed, the day and year first above written.


  
J. L. McCurdy

  
R. L. Curtis

STANDARD OIL COMPANY, an Indiana  
Corporation

ATTEST

  
Secretary

By   
Executive Vice President

### AGREEMENT OF INTERPRETATION

THIS AGREEMENT OF INTERPRETATION is made this 20<sup>th</sup> day of March, 1964, by and between STANDARD OIL COMPANY, an Indiana corporation (hereinafter referred to as "Standard"), AMOCO CHEMICALS CORPORATION, a Delaware corporation (hereinafter referred to as "Amoco"), BRAND PLASTICS COMPANY, a Delaware corporation (hereinafter referred to as "Brand"), J. L. McCURDY, Palos Verdes Estates, California (hereinafter referred to as "McCurdy"), and R. L. CURTIS, Arcadia, California (hereinafter referred to as "Curtis").

### R E C I T A L S

1. On November 1, 1960, the above-named parties entered into a certain Loan and Supply Agreement providing, among other things, that McCurdy and Curtis would personally guarantee the repayment of a loan which Standard agreed to make or to procure for Brand. Said Loan and Supply Agreement further provided that the personal guaranty "will terminate on the date of any acquisition by Standard or Amoco of all the outstanding stock of Brand as hereinafter provided."

2. On January 4, 1961, the above-named parties entered into a Construction Loan Agreement to implement the provisions of the Loan and Supply Agreement. Attached as Exhibit "D" to the Construction Loan Agreement is an Indemnification and Guaranty Agreement. The form of Agreement in that Exhibit was executed by McCurdy and Curtis and is presently in effect with respect to the loans made pursuant to the Construction Loan Agreement, the Supplemental Agreement dated June 26, 1962, and the Second Supplemental Agreement dated June 27, 1963. Paragraph 2 of the Indemnification and Guaranty Agreement provides that the personal guaranty of McCurdy and Curtis "shall remain in full force and effect until the principal and interest on said indebtedness shall be fully paid or until such earlier date on which Standard or Amoco shall acquire all Brand's outstanding stock."

It was the intention of the parties that in the event of any inconsistencies this language should govern the termination of the personal guaranty made by McGurdy and Curtis rather than the language appearing in the Loan and Supply Agreement.

3. On January 19, 1961, Standard assigned certain of its rights, and delegated certain of its obligations, arising from the Construction Loan Agreement to Amoco. The Assignment, which was executed by all the parties hereto, provides that the Construction Loan Agreement, and the Agreements executed and delivered pursuant thereto, are to be construed as if the name "Amoco" appeared wherever the name "Standard" presently appears, including Paragraph 2 of the Indemnification and Guaranty Agreement. This substitution of corporate names was intended to apply only to those portions of the Construction Loan Agreement dealing with the rights and obligations of Standard, and was not meant to affect the provisions for termination of the personal guaranty.

4. It is the belief of the parties hereto that the portions of the various Agreements referred to above may create in the minds of those persons not familiar with the background and negotiations, an ambiguity and uncertainty with respect to the rights and obligations of each party thereunder. It is the desire of the parties hereto that any such ambiguity or uncertainty be hereby permanently resolved.

#### A G R E E M E N T

NOW, THEREFORE, the parties to this Agreement of Interpretation hereby declare, acknowledge and agree that the effect of the Loan and Supply Agreement, Construction Loan Agreement, and Indemnification and Guaranty Agreement is that the personal guaranty by McGurdy and Curtis of all loans made pursuant to the Loan and Supply Agreement, Construction Loan Agreement, Supplemental Agreement and Second Supplemental Agreement, shall terminate and be extinguished, and each of them shall be released from the obligation to perform the same, on the date of any acquisition by Standard or Amoco of all the outstanding stock of Brand, irrespective of when, or the manner in

which, such acquisition takes place.

IN WITNESS WHEREOF, the parties hereby have duly executed this Agreement of Interpretation on the day and year hereinabove first written.

ATTEST:

*Edward Russell*  
Secretary

STANDARD OIL COMPANY

By *Robert C. Guinness*  
Executive Vice President

*L.M.L.*

ATTEST:

*R. H. Brown*  
Secretary

AMOCO CHEMICALS CORPORATION

By *Herschel W. Cudd*

ATTEST:

*R. L. Curtis*  
Secretary

BRAND PLASTICS COMPANY

By *J. L. McGurdy* PRES.

*J. L. McGurdy*  
J. L. MCGURDY

*R. L. Curtis*  
R. L. CURTIS



News Release from  
BRAND PLASTICS COMPANY  
Torrance, California  
Press Contact: Vic West 431-6612  
Chicago, Illinois - Area Code 312

For Immediate Release

TORRANCE, Calif., April 1, 1964 . . . . Brand Plastics Company, a polystyrene manufacturer, became a wholly owned subsidiary of Standard Oil Company (Indiana) on April 1st, according to J. L. McCurdy, president of Brand.

Operating management and personnel of Brand's three plants remain unchanged with McCurdy as president and Robert L. Curtis as vice president. Details of the transaction were not disclosed.

Brand Plastics manufactures and markets general purpose crystal and high impact polystyrene resins primarily for injection molding and extrusion applications. The company started operations in 1961 with a plant at Willow Springs, a suburb of Chicago, and has since opened plants at Torrance, California and Medina, Ohio. Total capacity of the three plants exceeds 50 million pounds per year.

Directors of the company are J. L. McCurdy, president; R. L. Curtis, vice president and secretary; Thomas W. Hughes, treasurer; Herschel H. Cudd; Grant A. Brown and George Rieger. Cudd is a director of Standard Oil Company (Indiana) and president of Amoco Chemicals Corporation, a subsidiary of Standard. Hughes, Brown and Rieger are also with Amoco Chemicals.

Styrene monomer, the principal raw material for polystyrene resins, is among the products marketed by Amoco Chemicals. The company has a monomer plant now under construction at Texas City, Texas, which will have a capacity of over 200 million pounds per year.



AMOCO CHEMICALS CORPORATION

130 East Randolph Drive  
Chicago, Illinois 60601

July 22, 1968

Mr. Val Harris, President  
Brand Plastics Company  
8400 Willow Springs Road  
Willow Springs, Illinois 60480

Subject: Agreement for Sale and Purchase of Polystyrene

Dear Mr. Harris:

This letter is for the purpose of confirming an agreement between Amoco Chemicals Corporation and Brand Plastics Company whereby Amoco has agreed to purchase from Brand and Brand has agreed to sell to Amoco, Brand's entire production of polystyrene at Brand's plants in Medina, Ohio, Willow Springs, Illinois, and Torrance, California.

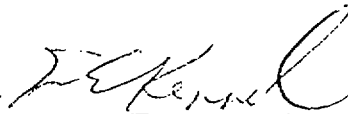
Delivery of polystyrene shall be made by Brand either to Amoco or designated customers of Amoco upon Amoco's orders. Title to polystyrene so delivered shall pass from Brand to Amoco at the time it is loaded aboard trucks or rail cars for shipment at Brand's plants or warehouses.

Amoco will pay Brand for all polystyrene purchased hereunder 87-1/2% of Amoco's net realization from the resale of such polystyrene to its customers. Accounting and payment shall be made monthly or at such other intervals as shall be agreed to between the parties.

If the above terms are satisfactory to you, please indicate your acceptance by signing and returning a copy of this letter. When so accepted by you, this letter shall constitute the agreement between our companies covering this arrangement for purchase and sale of polystyrene.

Yours truly,


AMOCO CHEMICALS CORPORATION

By 

W. E. Kennel, Vice President-Plastics

Accepted:

BRAND PLASTICS COMPANY

By   
Val Harris, President

RECEIVED

JUL 24 1968

BPACC00495

PAUL POWELL  
SECRETARY OF STATE

COPY TO: Lloyd Hale



25676362

OFFICE OF THE SECRETARY OF STATE  
SPRINGFIELD, ILLINOIS 62706

June 25, 1969

1600

Amoco Chemcials Corporation  
130 E. Randolph Drive  
Chicago 1, Illinois

Attn: Walter Lethem

RE: AMOCO CHEMICALS CORPORATION

Dear Sir:

Certified copy of Certificate of Merger was filed in  
this office today and the corporation credited with  
the \$100.00 filing fee.

By this filing, the Certificate of Authority of  
BRAND PLASTICS CO. was terminated.

Very truly yours,

*Paul Powell*  
Secretary of State

CORPORATION DIVISION  
PP:NEF:bl

COOK COUNTY, ILLINOIS  
FILED FOR RECORD  
1969 NOV 21 AM 9:47

*William H. Olson*  
RECORDER OF DEEDS  
25676362

25676362

68-05-997

B641 -1631

## RECEIPT AND CERTIFICATE

No. 15900

AMOCO CHEMICALS CORPORATION

NAME

246751

NUMBER

## DOMESTIC CORPORATIONS

ARTICLES OF INCORPORATION  
AMENDMENT  
MERGER/CONSOLIDATION  
DISSOLUTION  
AGENT  
RE-INSTATEMENT  
CERTIFICATES OF CONTINUED  
EXISTENCE  
MISCELLANEOUS

## FOREIGN CORPORATIONS

LICENSE  
✓ AMENDMENT -Merger  
SURRENDER OF LICENSE  
APPOINTMENT OF AGENT  
CHANGE OF ADDRESS OF AGENT  
CHANGE OF PRINCIPAL OFFICE  
RE-INSTATEMENT  
FORM 7  
PENALTY

## MISCELLANEOUS FILINGS

ANNEXATION/INCORPORATION—CITY  
OR VILLAGE  
RESERVATION OF CORPORATE NAMES  
REGISTRATION OF NAME  
REGISTRATION OF NAME RENEWALS  
REGISTRATION OF NAME—CHANGE  
OF REGISTRANTS ADDRESS  
TRADE MARK  
TRADE MARK RENEWAL  
SERVICE MARK  
SERVICE MARK RENEWAL  
MARK OF OWNERSHIP  
MARK OF OWNERSHIP RENEWAL  
EQUIPMENT CONTRACT/CHATTEL  
MORTGAGE  
POWER OF ATTORNEY  
SERVICE OF PROCESS  
MISCELLANEOUS  
ASSIGNMENT—TRADE MARK, MARK  
OF OWNERSHIP, SERVICE MARK,  
REGISTRATION OF NAME

I certify that the attached document was received and filed in the office of TED W. BROWN, Secretary of State, at Columbus, Ohio, on the 16th day of October A. D. 1969, and recorded on Roll B641 at Frame 1631 of the RECORDS OF INCORPORATION and MISCELLANEOUS FILINGS.



TED W. BROWN,  
Secretary of State

Filed by and Returned To: Amoco Chemicals Corporation

130 E. Randolph Dr.

Chicago, Illinois 60601

FEE RECEIVED: \$ 5.00

NAME: AMOCO CHEMICALS CORPORATION

BPACC00497 51-132

25676362

246761  
APPROVEDBy: HMA  
Date: 10/16/69  
Amount: 5.00  
251-132

State of Delaware



Office of Secretary of State.

*J. Eugene Bunting, Secretary of State of the State of Delaware,*  
do hereby certify that the above and foregoing is a true and correct copy of  
Certificate of Ownership of the "AMOCO CHEMICALS CORPORATION", merging  
the "BRAND PLASTICS CO.", pursuant to Section 253 of the General  
Corporation Law of the State of Delaware, as received and filed in  
this office the third day of June, A.D. 1969, at 9 o'clock A.M.

In Testimony Whereof, I have hereunto set my hand  
and official seal at Dover this third day  
of June in the year of our Lord  
one thousand nine hundred and sixty-nine.

*Eugene Bunting*

Secretary of State

*R M Caldwell*

Asst Secretary of State

CERTIFICATE OF OWNERSHIP AND MERGER

MERGING

BRAND PLASTICS CO.

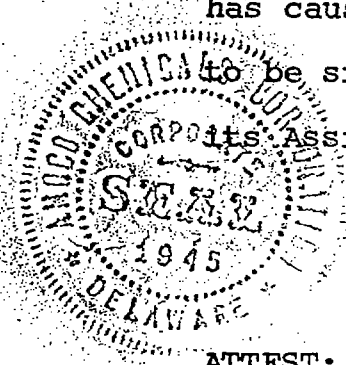
INTO

AMOCO CHEMICALS CORPORATION

(Pursuant to Section 253 of the General Corporation Law of Delaware)

Amoco Chemicals Corporation, a Delaware corporation, pursuant to the provisions of the General Corporation Law of the State of Delaware does hereby certify that this corporation owns all of the capital stock of Brand Plastics Co., a corporation incorporated under the laws of the State of Delaware and that this corporation by a resolution of its Board of Directors duly adopted at a meeting held on the 19th day of May, 1969 determined to and would merge into itself said Brand Plastics Co. A copy of said resolution and the Plan of Merger referred to therein is attached hereto and made a part hereof.

IN WITNESS WHEREOF, said Amoco Chemicals Corporation has caused its corporate seal to be affixed and this certificate to be signed by Herschel H. Cudd, its President, and R. D. Guy, its Assistant Secretary, this 19th day of May, 1969.



Herschel H. Cudd  
President

ATTEST:

Robert D. Guy  
Assistant Secretary

BPACC00499

25676362

STATE OF ILLINOIS )  
 ) SS.  
COUNTY OF COOK )

Be it remembered that on this 19th day of May, 1969, personally came before me, Dolores Schumann, a Notary Public in and for the County and State aforesaid, HERSCHEL H. CUDD and R. D. GUY, President and Assistant Secretary of AMOCO CHEMICALS CORPORATION, a corporation of the State of Delaware, the corporation described in and which executed the foregoing certificate, known to me personally to be such, and they, the said HERSCHEL H. CUDD and R. D. GUY as such President and Assistant Secretary duly executed said certificate before me and acknowledged the said certificate to be their act and deed and the act and deed of said corporation and that the facts stated therein are true; that the signatures of the said President and of the Assistant Secretary of said corporation to said foregoing certificate are in the handwriting of the said President and Assistant Secretary of said corporation, respectively, and that the seal affixed to said certificate is the common or corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year aforesaid.

Dolores Schumann  
Notary Public

My Commission Expires:

February 27, 1973

BPACC00500

25676362

RESOLVED, That in the judgment of the Board of Directors it is advisable that Brand Plastics Co. be completely liquidated by way of statutory merger pursuant to Section 253 of the Delaware General Corporation Law.

FURTHER RESOLVED, That this Board hereby approves and adopts the Plan of Merger presented to this meeting, a copy of which is affixed to and made a part of the minutes of this meeting.

FURTHER RESOLVED, That the officers of this corporation are authorized and directed to execute and deliver all instruments and other documents necessary to consummate said Plan of Merger and do or cause to be done such further acts as they may deem to be necessary or proper to effectuate the purpose of the foregoing resolution.

25676362

BPACC00501



## PLAN OF MERGER

Pursuant to Section 253, Delaware General Corporation Law, effective as of the close of business on May 31, 1969:

1. Brand Plastics Co., a Delaware corporation (hereinafter called the Subsidiary Corporation), shall be merged into Amoco Chemicals Corporation, a Delaware corporation (hereinafter called the Surviving Corporation), by the transfer to the Surviving Corporation of all the assets of the Subsidiary Corporation, subject to all of the Subsidiary Corporation's liabilities and obligations which the Surviving Corporation shall assume, in complete liquidation of the Subsidiary Corporation.

2. The capital stock of the Subsidiary Corporation, all of which is owned by the Surviving Corporation, shall be cancelled and retired. The capital stock of the Surviving Corporation shall be unaffected by the merger.

25676362

# State of Delaware



## Office of Secretary of State

*J. Eugene Bunting, Secretary of State of the State of Delaware,*  
do hereby certify that the above and foregoing is a true and correct copy of  
Certificate of Ownership of the "AMOCO CHEMICALS CORPORATION", merging  
the "BRAND PLASTICS CO.", pursuant to Section 253 of the General Corp-  
oration Law of the State of Delaware, as received and filed in this office  
the third day of June, A.D. 1969, at 9 o'clock A.M.

In Testimony Whereof, I have hereunto set my hand  
and official seal at Dover this fifteenth day  
of July in the year of our Lord  
one thousand nine hundred and sixty-nine.

*Eugene Bunting*

Secretary of State

*R H Caldwell*

Asst's Secretary of State

*Brand Plastics Co.*

April 13, 1970

Secretary of State  
State of California  
Sacramento, California

Attention: Corporate Section

Subject: Withdrawal of Qualification -  
Applied Research and Development  
Corporation and Brand Plastics Co.

Dear Sir:

Attached please find Certificates of Surrender of Right to Transact Intrastate Business in California for the above two foreign corporations, together with a check for \$4.00 in payment of filing fees. Both of these corporations were merged into Amoco Chemicals Corporation, a Delaware corporation, qualified to transact business in the State of California.

Tax Clearance Certificates covering these two corporations have been sent to your office from the Franchise Tax Board.

Yours truly,

Original signed by  
W. R. Lethem

Walter R. Lethem

WRL/f

attachments

BPACC00504



REMITTANCE FROM

**AMOCO CHEMICALS CORPORATION**130 EAST RANDOLPH DRIVE  
CHICAGO, ILLINOIS 60601

OUR REFERENCE				YOUR REFERENCE		KEY	NET AMOUNT	TOTAL AMOUNT
MO.	VO.	SEC.	SUB. SEC.	DATE	INVOICE NUMBER			
4	1	5	026	4	10		4 00	4 00

*Mailed to Secretary of State  
State of California  
Sacramento, Calif 4/13/70  
Withdrawal Certificate  
for Grand Plastics &  
Applied Research & Dev. Corp*

## Key Codes:

1. Corrected For Tax Error
2. Corrected For Computation Error
3. Temporary Advance
4. Permanent Advance
5. Expense Statement
6. Check Request
7. Payroll Deposit

FORM 67-102 (1-68)

ALL APPLICABLE DISCOUNTS HAVE BEEN TAKEN

DETACH BEFORE DEPOSITING

BPACC00505

## Certificate of Surrender of Right to Transact Intrastate Business

On behalf and by authority of Brand Plastics Co.

\_\_\_\_\_, a corporation organized and  
existing under the laws of Delaware, the

undersigned, V. Harris (President), and  
(President or Vice President)

G. A. Brown (Secretary), respectively, of said corporation,  
(Secretary, Assistant Secretary or Treasurer)

do hereby certify and declare:

1. Said corporation hereby surrenders its right and authority to transact intrastate business in the State of California, and:

- ☐ (a) Returns herewith for cancellation its Certificate of Qualification to transact such intrastate business.
- ☒ (b) There is attached hereto the affidavit of its duly authorized officer to the effect that the Certificate of Qualification to transact intrastate business in California has been lost or destroyed, as the case may be.
- ☐ (c) That no Certificate of Qualification has ever been issued to said corporation.

(Place a check mark in the box preceding whichever of (a), (b) or (c) is applicable.)

2. Said corporation hereby revokes its designation of agent for the service of process in California.

3. Said corporation consents that process against it in any action upon any liability or obligation incurred within the State of California prior to the filing of this Certificate of Surrender of Right to Transact Intrastate Business may be served upon the Secretary of State of the State of California.

4. The post office address to which the Secretary of State may mail copies of any process against the corporation that is served upon him is \_\_\_\_\_

c/o Amoco Chemicals Corporation, 130 East Randolph Drive  
Chicago, Illinois 60601

IN WITNESS WHEREOF the undersigned have subscribed their names this

13th day of April, 19 70.

x V. Harris (President)  
(President or Vice President) (Title)

x G. A. Brown (Secretary)  
(Secretary, Assistant Secretary or Treasurer) (Title)

STATE OF Illinois

COUNTY OF Cook

ss.

On this 13th day of April, 1970, before the undersigned, personally appeared V. Harris  
and G. A. Brown, known to me (or proved to me on the oath of --)  
to be the persons whose names are subscribed to the foregoing Certificate, and acknowledged that they executed the same as President  
(President or Vice President)  
and Secretary, respectively, of the  
(Secretary, Assistant Secretary or Treasurer)  
corporation named therein.

WITNESS MY HAND AND OFFICIAL SEAL.

[SEAL]

MY COMMISSION EXPIRES Apr 13, 1972

Florence Rosgit  
Notary Public

(Official Title)

NOTE: This Certificate cannot be filed unless it is accompanied by a Tax Clearance Certificate from the California Franchise Tax Board (1025 P Street, Sacramento) showing the corporation as having satisfied all franchise tax liability.

The Certificate of Qualification referred to in Paragraph 1 above must be attached to this Certificate unless such Certificate of Qualification has been lost or destroyed, in which event there shall be attached hereto an affidavit of the president, a vice president, the secretary, an assistant secretary or the treasurer to the effect that such Certificate of Qualification has been lost or destroyed, as the case may be. Certificates of Qualification were not issued by this office prior to September 18, 1959, and consequently, unless on or after that date the corporation filed with us a Statement and Designation (to qualify in California) or an Amended Statement and Designation, no Certificate of Qualification has been issued to it.

If the post office address to which any process against the corporation is to be sent by the Secretary of State, as provided in Paragraph 4 of this Certificate, is desired to be changed at any time after the filing of this Certificate, there may be filed with the Secretary of State a "Certificate of Change of Address of Surrendered Foreign Corporation," a form of which may be obtained from the Secretary of State.

The fee for recording this Certificate is \$2.00.

A F F I D A V I T

State of Illinois) \_\_\_\_\_  
                              : SS  
County of Cook     )

V. Harris, being duly sworn, upon his oath states that he is the President of BRAND PLASTICS COMPANY, a Delaware corporation, and that he has made a thorough search of the records of said corporation and that the Certificate of Qualification of said corporation to transact business in California has been lost.

V. Harris  
V. Harris

Subscribed and sworn to before me this 13th day of April, 1970.

Florence Loquist  
Notary Public

My Commission expires April 3, 1974.

111 CAPITOL MALL  
SACRAMENTO 95814

No. 481491

CORPORATION No. \_\_\_\_\_

Attn: Walter R. Lethem

DATE 4-16-70

bc

**IF STATEMENT INDICATES BALANCE DUE, DETACH THIS PART AND RETURN WITH REMITTANCE**

[illegible]

The document to which  
this statement refers was  
filed in this office on  
APR 15 1970

No. 481491

TOTAL CHARGES	4	00
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AMOUNT RECEIVED	4	00
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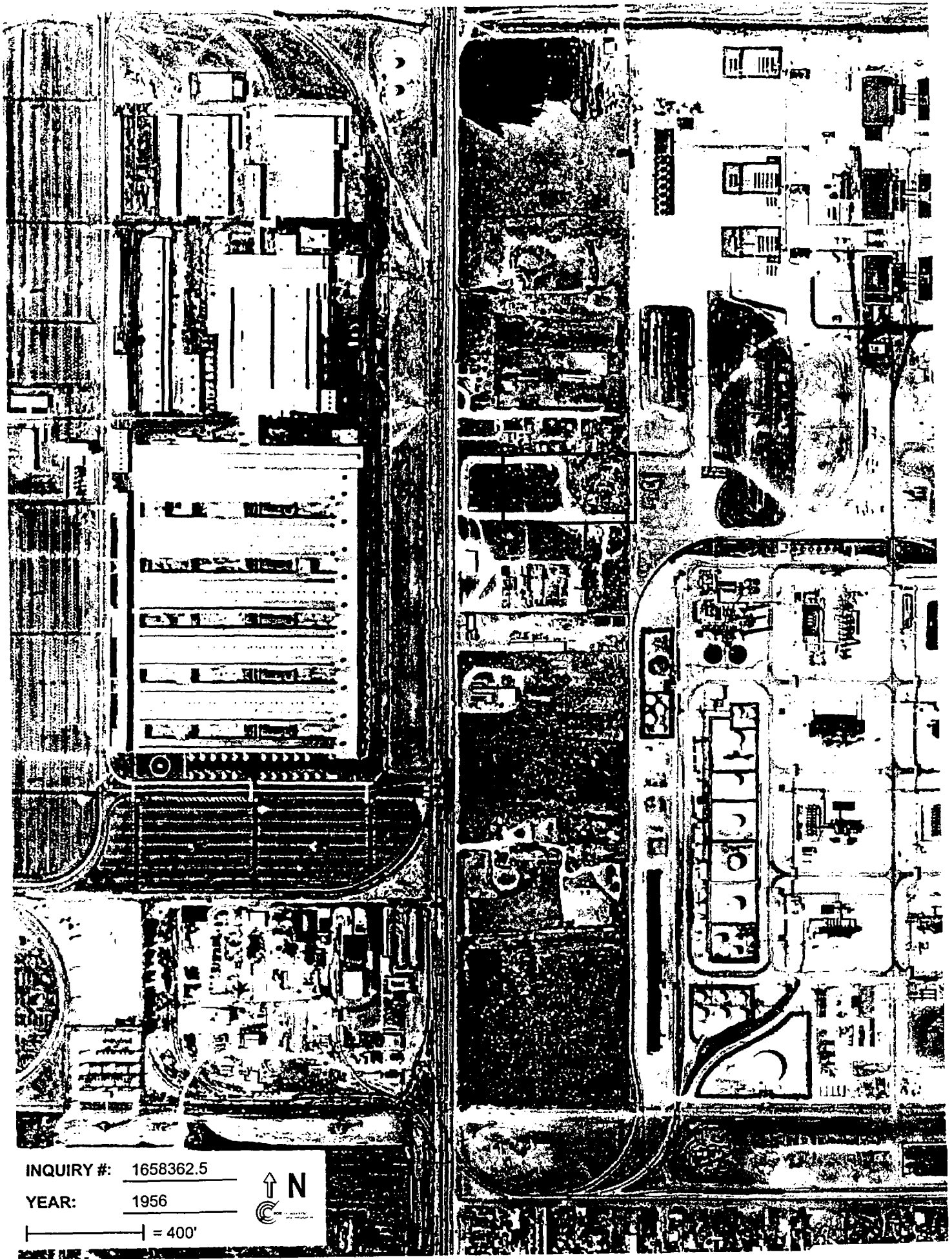
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INQUIRY #: 1658362.5

YEAR: 1956

— = 400'



BPACC00511



Formerly ERT

June 16, 1989  
File No: 0350-004

Mr. John M. Verrier  
Environmental Specialist  
Amoco Chemical Company  
Highway I-55 and Route 6  
Joliet, Illinois 60434

ENSR Consulting  
and Engineering

19782 MacArthur Boulevard  
Suite 365  
Irvine, CA 92715  
(714) 476-0321

RE: Transmission of Final Version of the Environmental Assessment  
Sampling and Analysis Plan for the Amoco Chemical Company  
Facility, Torrance, California

Dear Mr. Verrier:

ENSR Consulting and Engineering is pleased to submit the final version of the Sampling and Analysis Plan for the subsurface soil investigation at the aforementioned facility. The minor modifications discussed in our June 13th phone call have been incorporated.

We have tentatively scheduled the drilling to begin on Monday, June 26th. It is anticipated that we will be on the site until the end of the week.

As requested, Gene Schmidt and Beth Westfall have been added to the list of people receiving copies of all correspondence.

If you have any questions, please call either me or Ken Pitchford at this office.

Sincerely,  
ENSR CONSULTING AND ENGINEERING

  
Richard O. Richter, Ph.D., P.E.  
Manager, Engineering & Geology

cc: William T. Kerr, Plant Superintendent  
Gene Schmidt, Director of Groundwater Management  
Beth Westfall, Environmental Programs Coordinator

0350-004\LET02.ROR

BPT00024

ENVIRONMENTAL & SAFETY	
JUN 20 1989	
NOTE	HANDLE
GIB	CSW
DNB	CSW
PID	DWH
WY	
TMS	

BPACC00512



Formerly ERT

June 8, 1989  
File No: 0350-004

ENSR Consulting  
and Engineering

19782 MacArthur Boulevard  
Suite 365  
Irvine, CA 92715  
(714) 476-0321

Mr. John M. Verrier  
Environmental Specialist  
Amoco Chemical Company  
Highway I-55 and Route 6  
Joliet, Illinois 60434

RE: Transmission of Draft Environmental Assessment Sampling and  
Analysis Plan for the Amoco Chemical Company Facility,  
Torrance, California


Dear Mr. Verrier:

ENSR Consulting and Engineering is pleased to submit this Draft Sampling and Analysis Plan for the subsurface soil investigation at the aforementioned facility. As we discussed in our conversations, we have reduced the number of borings and samples in order to lower costs. We believe that the number of samples proposed should be sufficient to determine whether there is widespread soil contamination in the two tank farm areas.

Also, I have enclosed a brief description and evaluation of five remediation alternatives.

I will contact you next week to discuss possible modifications to the work plan and to answer any questions that you might have regarding either the SAP or the remediation alternatives. ENSR is pleased to provide environmental services to Amoco, and I look forward to working with you on this project.

Sincerely,  
ENSR CONSULTING AND ENGINEERING

  
Richard O. Richter, Ph.D., P.E.  
Manager, Engineering & Geology

cc: William T. Kerr, Plant Superintendent

0350-004\LET01.ROR

BPACC00513

## REMEDATION ALTERNATIVES

This brief report presents remediation alternatives which could possibly be used in the event that significant styrene contamination of soils is found during the site investigation at the Amoco Chemical Company Facility in Torrance, California. It provides a brief discussion of the technologies, along with a table listing their advantages and disadvantages, time frames, and order of magnitude cost estimates.

### ALTERNATIVES

Five alternatives were identified for remediation of volatile organic compound (VOC) contaminated soils. They are: vapor extraction, soil washing, in situ bioremediation, excavation, and no action.

#### 1. VAPOR EXTRACTION

Vapor extraction would require the installation of extraction and air recharge wells in the vadose zone. A vacuum would be applied to the extraction wells, and the volatile compounds, such as styrene and ethylbenzene, would leave the soils and be extracted with the air. The vapor would be treated either with a catalytic converter or granular activated carbon prior to discharge or recirculation.

#### 2. SOIL WASHING

Soil washing utilizes solvents or water to flush the contaminants out of the soils into the groundwater, which can then be extracted and treated. This would require a leach field above areas of soil contamination to introduce the flushing solution and a groundwater recovery system to capture the leachate for treatment by activated carbon or air stripping.

### 3. IN SITU BIOREMEDIATION

In situ bioremediation would involve stimulating the organisms present in the soils to biodegrade the volatile organics. Water containing essential nutrients and oxygen would be introduced into the soils through a leach field. This would require careful control in order to prevent leaching of the materials from the soils and carrying them to the groundwater.

### 4. EXCAVATION

Excavation is another alternative. The soils could either be remediated on site or sent to a disposal facility. Onsite remediation could either utilize biological treatment, vapor extraction, or soil washing. Offsite disposal would require disposal at either a class I or Class II landfill, with possible future liabilities. The viability of this alternative will be a function of the amount of contamination found.

### 5. NO ACTION

The last alternative is to not remediate the soils. This would require demonstrating to the agencies that there is minimal risk associated with this option. While possible, this option could require an enormous amount of testing and modeling to determine whether it were feasible. In addition, it would require negotiating with agencies and possible future liability.

### EVALUATION

Of the alternatives discussed, options 1, 4, and 5 appear to be the most viable at this time. Soil washing and in situ bioremediation are both more applicable to sites where groundwater is also impacted, which is not the case in this instance.



The degree and extent of contaminated soils will be a major factor in selecting the best remediation alternative. If the levels and extent of contamination are minor, no action may be the best solution. If the levels are high but localized, excavation may prove best. If the contamination is extensive, vapor extraction will likely prove the most viable. Our final recommendation will be presented in the Site Assessment Report prepared after the soil investigation is completed.

# RELATIVE MERITS OF REMEDIATION ALTERNATIVES

ACTION	COMMENTS	TIME FRAME(a)	COSTS	ADVANTAGES	DISADVANTAGES
A. Soil remediation by vapor extraction system.	New vadose zone extraction and air recharge wells. On-site vapor treatment.	1) 30-60 days	1) \$50-100	. Minimal ground	. Uncertain treatment
		2) 1-2 years	2) \$100-200	. Relative simplicity of operation.	
B. Soil remediation washing.	Leach field to introduce washing solution and groundwater recovery/treatment.	1) 45-90 days	1) \$200-300		. Possible permitting difficulties.
		2) 1-2 years	2) \$250-500		. Need for large leaching field.
C. Soil remediation by in-situ bioremediation.	Leach field to introduce microbial nutrients and oxygen.	1) 45-90 days	1) \$100-200	. Compounds destroyed.	. Potential long-term start-up process.
		2) 1 year	2) \$400-500	. Large leaching field.	
				. Possible G.W. contamination	
D. Soil excavation.	Excavation and on-site or off site disposal.	1) 30-45 days	2) \$9,000-13,000	. Straight forward technique	. Disruptive to terminal operation.
		2) 90 days		. Certainty of effectiveness	. High cost.
E. No action.	Leave contaminated soils in place. Soil testing, health risk assessment, agency correspondence and presentation.	1) 90 days - 1 year	2) 100-200	. Simplicity.	. Possible difficulties of agency approval.
				. Cost.	. Possible source of air + G.W. groundwater contamination.

(a) Time frame 1) indicates time estimate to initiate action.  
Time frame 2) indicates time estimate to complete action.

(b) Costs 1) indicates cost estimate to initiate action.  
Costs 2) indicates cost estimate to complete action.

BPACC00517



**Michael P. Donovan, R.G.**  
Manager of Geology



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**Richard O. Richter, Ph.D.**  
Manager,  
Engineering & Geology



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**BPACC00518**

**AMOCO CHEMICAL  
COMPANY  
POLYSTYRENE FACILITY  
TORRANCE, CALIFORNIA**



**ENVIRONMENTAL  
ASSESSMENT  
SAMPLING AND ANALYSIS  
PLAN**

**ENSR Consulting & Engineering  
(Formerly ERT)**

**June 1989  
DOCUMENT NO. 0350-004.2**

**BPACC00519**



**AMOCO CHEMICAL  
COMPANY  
POLYSTYRENE FACILITY  
TORRANCE, CALIFORNIA**

**ENVIRONMENTAL  
ASSESSMENT  
SAMPLING AND ANALYSIS  
PLAN**

**ENSR Consulting & Engineering  
(Formerly ERT)**

**June 1989  
DOCUMENT NO. 0350-004.2**

**BPACC00520**

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND

AMOCO Chemical Company operates a polystyrene manufacturing facility located at 1225 West 196th Street, Torrance, California. The plant location is shown on Figure 1, Site Location Map. Plant operations consist of formulating polystyrene product using styrene as a raw process material. Raw styrene is bulk-stored in two above-ground storage tank areas designated Tank Area 1 and Tank Area 2, as depicted on Figure 2, Site Plan.

Previous environmental studies conducted in 1988 have the revealed the presence of styrene, ethylbenzene, and tetrachloroethene in Tank Area 1 and Tank Area 2. These prior studies consisted of laboratory analysis of shallow soil samples obtained in various areas surrounding the styrene storage tanks. Results of these tests indicate a concentration of styrene up to 9,000  $\mu\text{g/kg}$  in soils at two feet depth in Tank Area 1; and ethylbenzene at 50,000  $\mu\text{g/kg}$  and tetrachloroethene at 4,000  $\mu\text{g/kg}$  in soils at one foot depth in Tank Area 2.

The following inferences are drawn based on the results of the previous environmental testing:

1. The occurrence of soil contamination appears to occur randomly over large portions of Tank Area 1 and Tank Area 2. However, it is currently uncertain whether soil contamination is isolated in small areas or is present continuously over wide areas.
2. The depth of soil contamination is not known because previous testing has been limited to the upper five feet of the soil profile.
3. The presence of styrene, previously detected only in Tank Area 1 soils, and ethylbenzene, detected in Tank Areas 1 and 2, are presumed to have resulted from routine tank filling and maintenance operations. The occurrence of tetrachlorethene in Tank Area 2 soils is more problematic as this material is reported not to have been used or stored in either area.



## 1.2 Purpose and Scope

The purpose of this Plan is to guide field and laboratory activities designed to estimate the horizontal and vertical extent of soil contamination by styrene, ethyl benzene, tetrachloroethene, and related volatile organic compounds. This information will be used to develop detailed potential remedial options such as excavation and disposal of contaminated soils or active soil venting with vapor treatment. The selected remedial options would be coordinated with planned construction activities at Tank Area 1 and Tank Area 2.

The scope of this Plan includes approximately fifteen test borings with soil sampling to anticipated depths of about 20 feet by powered auger equipment. There is also a provision for limited hand auger sampling in areas inaccessible to motorized equipment. Selected samples will be laboratory analyzed by appropriate methods to test for the occurrence of soil contaminants currently known to occur in Tank Areas 1 and 2. An additional element of this Plan is a project-specific Health and Safety Plan designed to minimize the exposure of field personnel to potentially harmful substances and conditions, and detailing emergency response procedures. The Health and Safety Plan is presented in Appendix A.

## 2.0 TECHNICAL APPROACH

### 2.1 Location of Test Borings

Test borings will be drilled in Tank Area 1 and Tank Area 2. A total of nine borings are planned in Tank Area 1, at the approximate locations shown on Figure 3, Tank Area 1 - Test Boring Locations. Six additional borings are planned for Tank Area 2 as shown on Figure 4, Tank Area 2 - Test Boring Locations. The test boring locations have been selected to maximize the probability of encountering soil contamination and to provide information regarding the lateral and vertical extent of contamination. For example, areas where soil contamination has been detected by prior studies will be tested to determine the depth of contamination, and areas between known areas of contamination will also be tested.

### 2.2 Drilling Methods

The selected boring locations shown on Figures 3 and 4 will be drilled by powered auger. Additional supplemental soil samples may be collected by hand auger at locations where sampling is indicated by field observations of contamination but which are not accessible by powered auger equipment.

The powered auger equipment consists of a skid-mounted hollow-stem auger specially designed for use in small or restricted spaces inaccessible to standard truck-mounted equipment. Samples are collected by use of standard hammer-driven split-spoon sampler. Any supplemental samples will be collected by hand auger in combination with a hand-operated slide-hammer sampler. The principal limitations of the manual sampling device will be the depth of penetration, which is expected to be about ten feet. If used, this method will enable collection of useful data regarding depth of soil contamination.

## 2.3 Sample Collection, Logging, and Screening

Soil samples will be collected at ground surface and at 5-foot intervals to the maximum depth of penetration, which is anticipated to be 20 feet in the case of powered equipment and 10 feet with manual equipment.

Soil samples will be collected by the powered auger using an 18-inch, 2.5-inch diameter, split-spoon drive sampler. Hand auger samples will be collected with a 6-inch long, 2-inch diameter drive sampler fitted with a single 6-inch long brass sample sleeve. All sampling equipment will be thoroughly cleaned and decontaminated before sample collection. Decontamination will consist of a tap water rinse, a thorough scrubbing with tap water and trisodium phosphate detergent, a second tap water rinse, and a final rinse with distilled water.

Lithologic logs of the boreholes will be compiled and recorded from drill cuttings and split-spoon samples by the site geologist. Copies of the logs will be included in the final report for each area. Soils will be described in accordance with the Unified Soil Classification System. Soil moisture, hydrocarbon odors, and other significant characteristics will be noted on the boring logs.

Collected sample materials will be screened in the field as a basis for selection for laboratory analysis. The screening method will consist of ambient temperature headspace analysis of soil materials by use of a portable gas chromatograph calibrated to styrene and ethylbenzene. Those samples exhibiting the highest relative concentration of these vapors in each boring will be laboratory analyzed. Power auger borings will be drilled to depths such that field indications, including vapor concentrations, indicate significant reduction or absence of contamination.

Upon completion of sampling, all borings will be backfilled with cement-bentonite grout to five feet below grade. Drill cuttings will be stored in 55-gallon steel drums. The drums will be labeled with boring number, responsible geologist, and date of



# ENSR

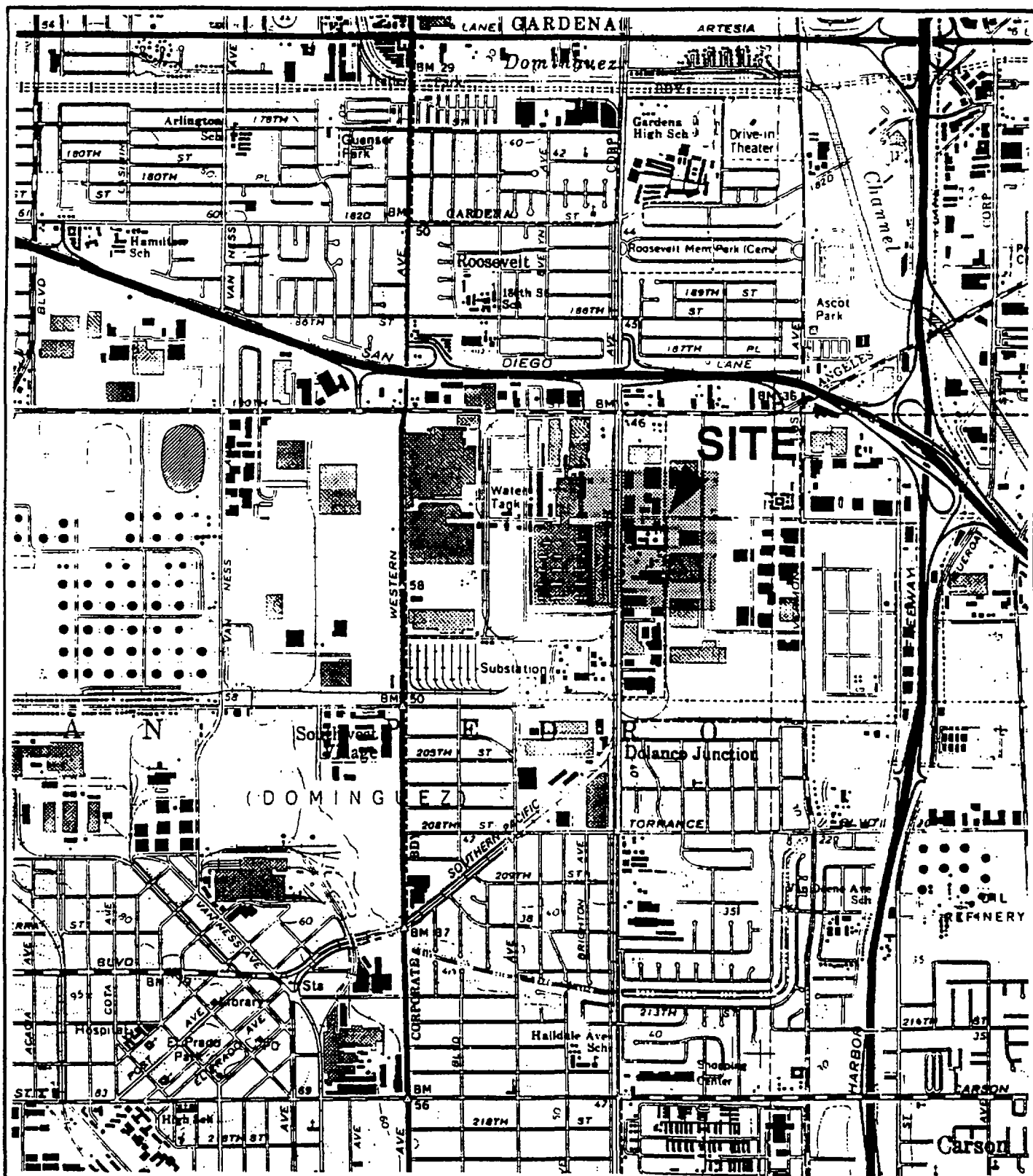
boring. Drums will be temporarily stored onsite until laboratory results determine which drum contents will be classified as hazardous for disposal as hazardous materials.

Soil samples will be prepared for shipment to the laboratory as follows. Upon retrieval from the sampler, the sample tube will be covered on both ends with Teflon tape and plastic end caps, secured with plastic tape, and identified with indelible ink. Each sample will be labelled with boring number, sample depth, sample analyses, and data and time collected. Samples will then be placed in a pre-cooled ice chest and transported with documented chain-of-custody forms to a state certified laboratory for chemical analysis.

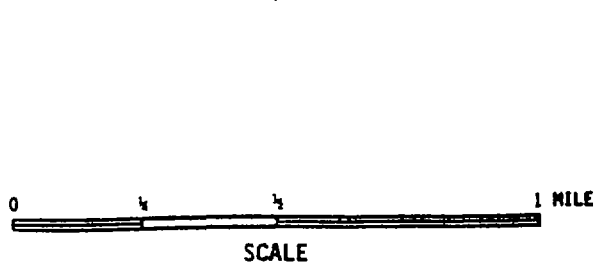
Soil sampling, field gas chromatography, decontamination, and sample handling procedures will follow the appropriate protocols described in ENSR Standard Operating Procedures attached as Appendices B, C, D, and E.

## 2.4 Laboratory Analysis

All samples selected for laboratory testing will be analyzed by EPA Method 8240 to determine soil concentrations of the known contaminants styrene, ethylbenzene, and tetrachloroethene, and other related volatile organic compounds.



REFERENCE: USGS 7.5 MINUTE SERIES  
TORRANCE QUADRANGLE 1981

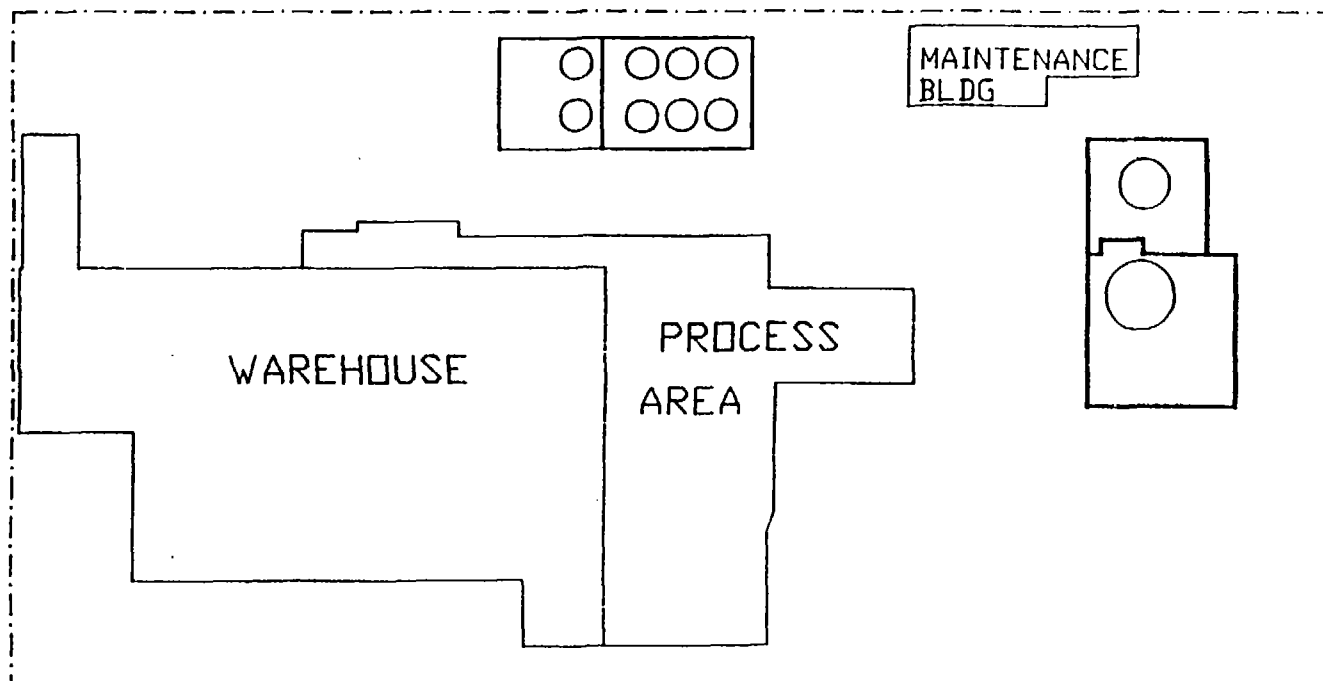


**ENSR**

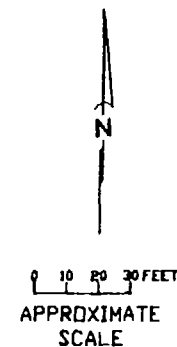
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SITE LOCATION MAP  
AMOCO CHEMICALS CORPORATION  
1225 WEST 196TH STREET  
TORRANCE, CALIFORNIA

DRAWN BY: <i>BM</i>	DATE: <i>6/7/89</i>	PROJECT NO: 0350-004
CHK'D BY: <i>ROT</i>	REVISED:	DWG. NO: FIGURE 1



## EXPLANATION



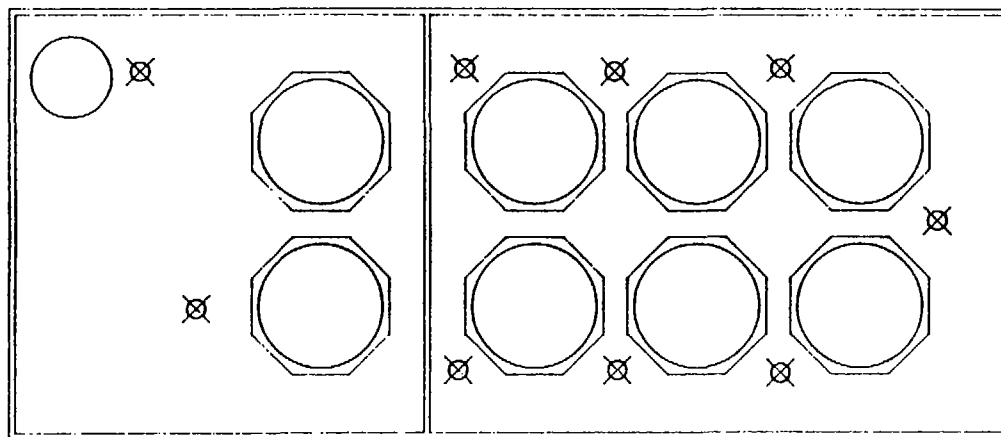
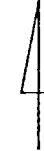
**ENSR**

SITE PLAN  
AMDCD CHEMICALS CORPORATION  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

by: C. Keller PROJECT 0350-004 FIGURE 2

BPACC00528

NORTH



## EXPLANATION

✕ PROPOSED BORING LOCATION

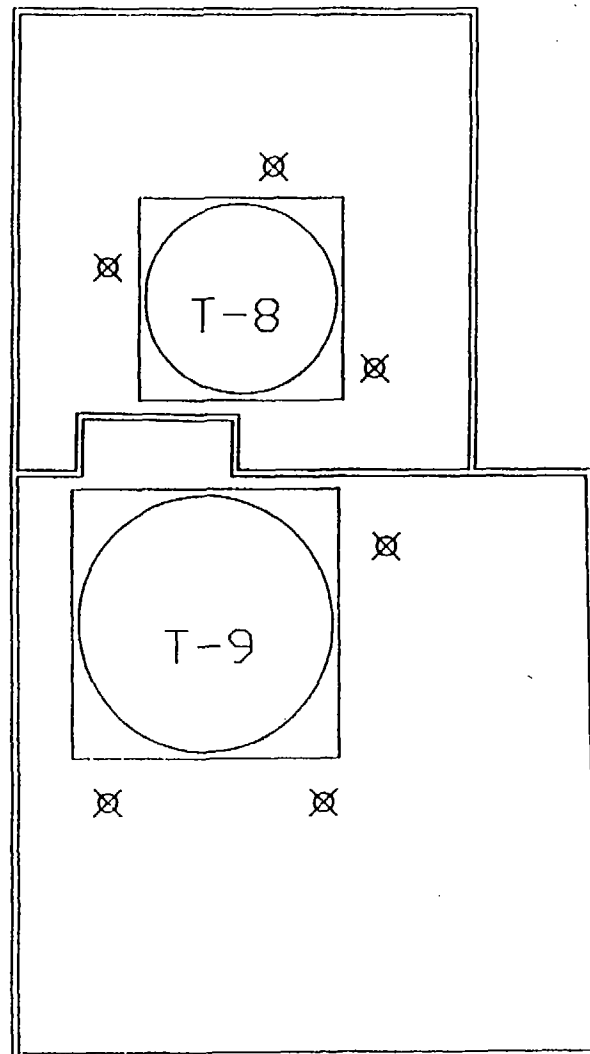
0 10 Feet  
APPROXIMATE  
SCALE

**ENSR**

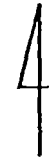
TANK AREA 1  
TEST BORING LOCATIONS  
AMOCO CHEMICAL COMPANY  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

by: C. Keller PROJECT 0350-004 FIGURE 3

BPACC00529



NORTH



## EXPLANATION

✕ PROPOSED BORING  
LOCATIONS

0 10 20 feet  
APPROXIMATE  
SCALE

**ENSR**

TANK AREA 2  
TEST BORING LOCATIONS  
AMOCO CHEMICAL COMPANY  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

by C. Keller PROJECT 0350-004 FIGURE 4

BPACC00530

APPENDIX A

**SITE HEALTH AND SAFETY PLAN**

HEALTH AND SAFETY PLAN  
FOR AMOCO CHEMICAL FACILITY  
TORRANCE, CALIFORNIA

ENSR Document No. 0350-004-100  
June 1989

Prepared for  
AMOCO CHEMICAL COMPANY  
Joliet, Illinois

ENSR Consulting and Engineering  
19782 MacArthur Boulevard  
Irvine, California 92715

BPACC00532

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**ENSR**

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## ABBREVIATIONS AND ACRONYMS

APR	air-purifying respirator
CPR	cardiopulmonary resuscitation
FP	field personnel
HASP	Health and Safety Plan
HSC	Health and Safety Coordinator
LEL	lower explosive level
OSHA	Occupational Safety and Health Administration
OVA	organic vapor analyzer
PEL	permissible exposure limit
PID	photoionization detector
PM	Project Manager
PPE	personal protective equipment
ppm	parts per million
PVC	polyvinyl chloride
RHSM	Regional Health and Safety Manager

## 1. INTRODUCTION

This site-specific Health and Safety Plan (HASP) has been developed by ENSR to establish the health and safety procedures required to minimize any potential risk to personnel who will perform activities for the Amoco Chemical Company's polystyrene manufacturing facility in Torrance, California.

The provisions of this plan minimally apply to all ENSR personnel and subcontractors who will potentially be exposed to safety and/or health hazards during the performance of activities associated with this site.

This HASP has been written in compliance with the requirements of the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120), the ENSR Consulting and Engineering Health and Safety Policy Manual, and the ENSR Consulting and Engineering Hazardous Waste Site Health and Safety Manual. All activities covered by this HASP must be conducted in complete compliance with this HASP and with all applicable federal, state and local health and safety regulations. Personnel covered by this HASP who cannot or will not comply with these requirements will be excluded from site activities by the ENSR Project Manager.

The procedures in this plan have been developed based upon current knowledge regarding the specific chemical and physical hazards which are known or anticipated for the operations to be conducted at this site.

All personnel covered by this HASP, including subcontractor personnel, must receive a copy of it and return the HASP signoff sheet found on the last page of the plan. This sheet must be returned to the ENSR Project Manager prior to performing any onsite activities.

## 2. FACILITY BACKGROUND/WORKPLAN

The Amoco Chemical Company currently operates a polystyrene manufacturing facility at 1225 West 196th Street in Torrance, California. Styrene, the raw material used in the manufacturing process, is stored onsite in aboveground storage tanks. These tanks are presently placed on the ground within grouted masonry wall containment structures. Previous site investigations have identified both styrene and ethylbenzene in soils near the storage tanks. Ethylbenzene is a decomposition product of styrene. Tetrachloroethene was also found in at least one sample. Its presence may be due to laboratory cross-contamination.

ENSR's scope of work involves the drilling of approximately 15 soil borings to a maximum anticipated depth of 20 feet within the tank farm. Borings will be drilled using a portable hollow-stem auger; samples will be collected with a split-spoon drive sampler. Samples will be collected at 5-foot intervals.

### 3. KEY PERSONNEL AND RESPONSIBILITIES

<u>Rich Richter:</u>	<u>Project Manager</u>
<u>Ken Pitchford:</u>	<u>Technical Lead</u>
<u>Mark Wood:</u>	<u>Site Manager and Health and Safety Coordinator</u>
<u>Alice Armstrong:</u>	<u>Regional Health and Safety Manager</u>

The organization and responsibilities for implementing safe onsite activities, and more specifically the requirements contained in this HASP, are described below. The implementation of health and safety at this site will be an integrated effort amongst the ENSR Onsite Manager, the ENSR Regional Health and Safety Manager (RHSM), the appointed onsite Health and Safety Coordinator (HSC), ENSR Field Personnel (FP), and any subcontractor. The specific individuals who will fill these roles on this project are provided on the Emergency References Table at the back of this document.

#### 3.1 ENSR Project Manager

The ENSR Project Manager (PM) is, by designation, the individual who has the primary responsibility for ensuring the overall health and safety of this project. The PM, therefore, has the primary responsibility for ensuring the implementation of the requirements of this HASP. Some of the PM's specific responsibilities include:

- Assuring that all onsite personnel have received a copy of and read this HASP and have completed the HASP signoff sheet.
- Assuring that all personnel have attended a briefing apprising them of the contents of the HASP and site-specific hazards prior to performing work onsite.
- Assuring that sufficient personal protective equipment (PPE), as required by this HASP, is available onsite.
- Assuring that all subcontractor personnel submit the documentation of employee participation in a medical monitoring program and training program.
- Maintaining a high level of health and safety consciousness among employees at the work site.
- Maintaining regular communications with the HSC and, if necessary, the RHSM.

### **3.2 Regional Health and Safety Manager**

The RHSM is the individual responsible for the preparation, interpretation, and modification of this HASP. Modifications to this HASP which may result in less stringent precautions cannot be undertaken by the PM or the onsite HSC without the approval of the RHSM. Specific duties of the RHSM include:

- Advising the PM and HSC on matters relating to health and safety on this site.
- Recommending appropriate PPE and air monitoring instrumentation to protect personnel from site hazards.
- Performing field audits to monitor the effectiveness of this HASP and to assure compliance with it.
- Performing personal exposure monitoring where required and where deemed necessary to determine the adequacy of protective measures and PPE specified by this HASP.
- Maintaining contact with PM to regularly evaluate site conditions and new information which might require modifications to the HASP.
- Working with the PM to ensure that sufficient PPE is available onsite.
- Conducting briefing meetings, when necessary, to apprise personnel of the contents of the HASP and the site hazards.

### **3.3 Onsite Health and Safety Coordinator**

The appointed HSC will be a member of the ENSR project field team. The HSC is responsible for enforcing the requirements of this HASP once onsite work begins. By design, the HSC has the authority to immediately correct all situations where noncompliance with this HASP is noted and to immediately stop work in cases where an immediate danger is perceived. Some of the HSC's specific responsibilities include:

- Procuring and distributing the PPE needed for this project.
- Procuring the air monitoring instrumentation required and performing air monitoring.

- Verifying that all PPE and health and safety equipment is in good working order.
- Setting up and maintaining the personnel decontamination facility.
- Notifying the PM and the RHSM of all noncompliance situations and immediate danger situations.
- Supervising and monitoring the safety performance of all personnel to ensure that required safety and health procedures are followed, and correcting any deficiencies.
- Conducting accident/incident investigations and preparing accident/incident investigation reports.
- Initiating emergency response procedures.

### **3.4 Field Personnel**

All ENSR and subcontractor FP are responsible for following the health and safety procedures specified in this HASP and for performing their work in a safe and responsible manner. Some of the specific responsibilities of the FP are as follows:

- Obtaining a copy of the HASP and reading it in its entirety prior to the start of onsite work.
- Bringing forth any questions or concerns regarding the content of the HASP to the PM or the RHSM prior to the start of work.
- Reporting all accidents and incidents to the PM.
- Complying with the requests of the appointed HSC.

## 4. JOB HAZARD ANALYSIS

### 4.1 Chemical Hazards

Styrene and ethylbenzene are aromatic hydrocarbons which have sweet odors at low concentrations. As with many solvent-like hydrocarbons, the primary route of exposure is through the inhalation of vapors. Acute exposure to high concentrations of these hydrocarbons may produce irritation of the mucous membranes of the upper respiratory tract, nose, and mouth, followed by symptoms of narcosis, cramps, and death due to respiratory center paralysis. Effects of short-term exposure under laboratory conditions included prolonged reaction time and decreased manual dexterity. Liquid styrene is a low-grade cutaneous irritant, and repeated contact may produce a dry, scaly, and fissured dermatitis.

OSHA has established a permissible exposure limit (PEL) for styrene of 50 ppm. Styrene sickness - consisting of drowsiness, nausea, headache, fatigue, and dizziness - has been documented in workers exposed at 200 to 700 parts per million (ppm) concentrations. The liquid is flammable (flash point 90°F) with a lower explosive level (LEL) concentration of 11,000 ppm. A PEL of 100 ppm has been established for ethylbenzene. This compound is also flammable (flash point 59°F) and its LEL concentration is 10,000 ppm.

### 4.2 Physical Hazards

The use of a drilling rig for soil borings can present operational hazards specifically related to drilling rig use. ENSR personnel are to remain clear of the mechanical portions of the rig while it is in operation. If utility lines or cables transect the site, the local utility companies must be alerted to establish drill locations.

## 5. JOB HAZARD SUMMARY

A significant chemical hazard could be present on this site, both as a result of vapors released during drilling activities as well as the close proximity of tanks and lines to some of the drilling locations. Previous site studies reported field vapor readings as high as 620 ppm at a depth of 1 to 2 feet.



## 6. AIR MONITORING

### 6.1 Instruments

An HNu photoionization detector (PID) equipped with a 10.2-eV lamp or a Foxboro organic vapor analyzer (OVA) will be used to monitor the breathing zone of personnel. An action limit of 25 units above background has been established. When the HNu or OVA indicate sustained breathing zone concentrations in excess of 25 units or more, ENSR personnel will use a detector tube for styrene to quantify concentration levels. Respiratory protection, as described in Section 7 of this plan, will be donned should concentrations exceed 25 ppm.

An explosimeter will be used to measure explosive levels of styrene/ethylbenzene released during drilling activities. The instrument should have both an audio and visual alarm. The alarm should be set to sound at 10 percent of the LEL. Should the alarm sound, personnel in the work area will leave and contact the ENSR PM and the RHSM.

### 6.2 Equipment Use

The use of the OVA and HNu will be in accordance with the guidelines established in ENSR's Standard Operating Procedures (SOP), entitled "Operation/Calibration of OVA-128 Portable Organic Vapor Analyzer No. 7310," and "Operation/Calibration of the HNu Photoionization Analyzer No. 7315," respectively. The SOPs are included as Attachment A. All other equipment will be used per the manufacturer's operating specifications and guidelines. Where applicable, equipment shall be calibrated at the start and end of each day and recorded in the field logbook.

## 7. PERSONAL PROTECTIVE EQUIPMENT

### 7.1 Respiratory Protection

If OVA or PID breathing zone readings are sustained above 25 units above background and detector tube results indicate such concentrations, MSA Comfo II half-mask air-purifying respirators (APR) with GMC-H cartridges will be donned. Respiratory protection should also be donned if odors become objectionable at any time. If used, respirator cartridges are to be changed after every 8 hours of use or when breakthrough occurs, whichever is first. If sustained concentrations above 100 ppm are encountered, ENSR should cease operations and confer with both Amoco personnel and the RHSM before proceeding.

### 7.2 Protective Clothing and Equipment

The following PPE must be worn when performing field activities:

- regular Tyvek coveralls
- inner polyvinyl chloride (PVC) gloves
- outer nitrile gloves
- chemically-resistant steel-toed boots
- hardhat

## 8. SITE CONTROL

Only authorized personnel will be allowed to enter the work area. The number of personnel should be kept to a minimum in the drilling area. An emergency trained member of Amoco will be present during all drilling activities conducted within the walled enclosure. This individual will be ready to respond immediately should a line be punctured or tank disturbed by ENSR personnel.

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## 9. DECONTAMINATION

Proper decontamination will be required of all personnel and equipment which come into contact with contaminated materials per ENSR's SOP entitled "Decontamination of Equipment No. 7600" (Attachment B). Personnel decontamination will be accomplished by following a systematic procedure of cleaning and removing PPE. Contaminated PPE, such as boots, will be rinsed free of gross contamination, scrubbed clean in a detergent solution, and then rinsed clean. To facilitate this, a three-basin wash system will be set up onsite. Alternative decontamination procedures, such as steam cleaning or pressure washing of field boots, may be used if available. Disposable PPE, such as Tyvek coveralls, gloves, etc., will be disposed of as general refuse. Respirators, if used, will be cleaned after each use with respirator wipe pads and will be stored in plastic bags after cleaning.

## 10. GENERAL SAFE WORK PRACTICES

The following measures are designed to augment the specific health and safety guidelines provided in this plan.

- The "buddy system" will be used at all times by all field personnel. No one is to perform onsite activities alone.
- Avoidance of contamination is of the utmost importance. Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces or materials. Walk around (not through) puddles and discolored surfaces. Avoid sitting, kneeling, or resting equipment on contaminated surfaces.
- Protect air monitoring equipment from water and contamination by bagging.
- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer of materials is prohibited in the work area.
- Hands and face must be thoroughly washed upon leaving the work area before eating, drinking, or any other activities.
- Beards or other facial hair that interfere with respirator fit are prohibited for those individuals who may be required to use respiratory protection.
- The use of alcohol or drugs is prohibited during the conduct of field operations.
- Safety equipment described in Section 6 will be required for all field personnel unless otherwise approved by the ENSR RHSM.
- If any electric-powered equipment is used onsite, it should be explosion-proof, and should be fed electrically through a ground-fault interrupter approved for outdoor use.

## **11. EMERGENCY RESPONSE PROCEDURES**

### **11.1 Planning**

Prior to work site entrance, the HSC shall plan emergency actions and discuss them with personnel conducting project work. Initial planning includes establishing the best means for evacuation from the site in case of a catastrophe (e.g., explosion, fire, etc.)

### **11.2 Emergency Services**

A tested system must exist for rapid and clear distress communications, preferably voice, from all personnel to the HSC. The HSC shall ensure that all personnel working at the site know how to communicate with the appropriate local emergency response units, and provide adequate and clear directions between ENSR work sites and the location of those units, prior to commencing any onsite investigation or operations. Emergency response contacts and telephone numbers are included as Attachment C. A copy of this information must be posted in a visible location onsite before operations commence.

### **11.3 First Aid**

Qualified personnel shall give first aid and stabilize any employee needing assistance. Life support techniques such as cardiopulmonary resuscitation (CPR) and treatment of life-threatening problems such as bleeding, airway maintenance, and shock shall be given top priority. Professional medical assistance shall be obtained at the earliest possible opportunity. If assistance beyond first aid is required, phone 911 and request emergency medical assistance.

A first-aid kit and portable eyewash shall be maintained at each drilling location. When drilling, these items should be kept in a clean location near or on the drill rig.

Emergency first-aid procedures for organic compounds include:

<u>Exposure</u>	<u>Procedure</u>
<u>Eyes</u>	<u>Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If injury occurs or irritation persists, transport person to emergency room for medical attention as soon as possible.</u>
<u>Skin</u>	<u>Wash skin thoroughly with soap and water. See a doctor if any unusual signs or symptoms or if any skin irritation occurs. Launder contaminated clothing.</u>
<u>Inhalation</u>	<u>Move exposed person to fresh air. If breathing has stopped, apply artificial respiration. Call 911 immediately.</u>
<u>Ingestion</u>	<u>If swallowed, DO NOT make person vomit. Call Poison Control Center immediately.</u>

#### 11.4 Fire Protection and Response

To ensure that fire and explosion hazards are minimized, plans and procedures must be coordinated with the local Fire Department. If suitable water supplies are unavailable or where water use may be inappropriate, 20- or 30-pound Class ABC fire extinguishers may be necessary for each drill rig or field crew.

Call 911 in the event of any fire at a work site.

#### 11.5 Guidelines for Response

If any emergency involving actual or suspected personal injury occurs, the HSC, work supervisor, or surviving person shall follow these steps:

- Remove the exposed or injured person(s) from immediate danger.
- Render first aid if necessary. Decontaminate affected personnel.

- Obtain paramedic service or ambulance transport to local hospital by calling 911. An ENSR site member will accompany any person to the medical facility and will remain with the person until release or admittance is determined.
- Other personnel onsite shall be evacuated to a safe distance until the Fire Department determines that it is safe for work to resume.
- At the earliest time practicable, the HSC shall contact the Project Manager, or his designee, and the RHSM, and give details of the incident.
- Any accident/incident resulting in an OSHA recordable injury or illness, treatment at a hospital or physician's office, property damage, or a near-hit accident, requires that an accident/incident report be completed and submitted to the RHSM. A copy of the ENSR Supervisor's Accident/Incident Investigation Report form is found as Attachment D.



## 12. MEDICAL SURVEILLANCE/TRAINING REQUIREMENTS

All personnel who will be perform or be exposed to activities associated with Task 2 must have completed the training and medical surveillance requirements specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e) and (f)].

Therefore, such personnel must have completed the specified 8 hours of refresher training and/or the 40 hours of initial training within the last year. Managers or supervisors of personnel performing such activities must have completed the specified 8 hours of management training. In addition, such personnel must have completed and passed, without restrictions, an annual and/or baseline occupational medical surveillance examination within the last year.

Documentation of the above, in the form of a copy of each employee's training certificate(s) and summary letter from the occupational medical surveillance examination, must be provided to the ENSR onsite manager, prior to performing activities at the site.

ATTACHMENT A

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**ENSR**

## STANDARD OPERATING PROCEDURE

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Date: 2nd Qtr. 1987

Title: Operation/Calibration of OVA-128 Portable  
Organic Vapor Analyzer in the Survey Mode

Number: 7310

Revision: 1

### 1.0 Introduction

The organic vapor analyzer (OVA) is used by ERT personnel in the field for safety and survey monitoring of ambient air, determining the presence of volatile organic compounds in soil and water, and detecting leakage of organic volatiles.

Personnel responsible for using the OVA should first read the factor operator instruction manual and be thoroughly trained in the operation, calibration, and maintenance of the instrument.

In the survey mode the OVA provides a continuous, direct readout of the total concentration of organic vapor/gas compounds, expressed as methane equivalent or the equivalent concentration of any organic gas used to calibrate the instrument. It has a chemically resistant sampling system, and can be calibrated to almost any organic compound which is a gas at ambient conditions. The instrument is portable and lightweight (12 pounds), and can be carried about while monitoring. It can also be used as a fixed, remote monitoring device.

### 2.0 Principal of Operation

During operation, ambient air is continuously drawn into the instrument through the probe/readout assembly and sample channel by an internal pumping system. The sample flow is metered at a constant rate and passed through porous metal particle filters before reaching the detector chamber, a flame ionization detector (FID). The sample is introduced to a hydrogen flame and combusted. Any carbon compounds present are ionized to form positively charged fragments which are collected by a negative electrode, producing a potentiometric change. This electrical signal, proportional to the concentration of organic compounds present, is amplified, transmitted to the probe/readout assembly, and seen as a needle deflection on the meter.

### 3.0 Specifications

Detection range:	0.01 to 1000 ppm.
Response time:	less than 2 seconds.
Readout:	0-10 ppm, 0-100 ppm, 0-1000 ppm, 250° linear scaled meter; external monitor connector.
Sample flow rate:	nominally 2 liters per minute (not variable).

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Title: Operation/Calibration of OVA-128 Portable  
Organic Vapor Analyzer in the Survey Mode

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Fuel supply: 75 cubic centimeter tank of pure hydrogen at maximum pressure of 2300 psig, refillable while in case.

Primary electrical power: rechargeable and replaceable 12 VDC battery pack.

Service life: minimum of 8 hours continuous operating time with hydrogen supply and battery power.

### 4.0 Required Materials

- Calibration Gas: Compressed gas cylinder of methane in air or similar stable gas mixture of known concentration. The selected gas should have an ionization potential similar to that of the vapors to be monitored, if known. The concentration should be at 50-75% of the range in which the instrument is to be calibrated.
- Regulator for calibration gas cylinder.
- Approximately 3-4 feet of teflon tubing
- Fluoroware vent-union tee
- "Magic Marker".
- Hydrogen recharge supply (reagent-grade Hydrogen)

### 5.0 Start Up

Connect the umbilical cord of the probe/readout assembly to the side pack. Select the desired pickup fixture and ensure that the particle filter is in place. Attach the pickup to the probe/readout assembly.

Move the INSTR switch to the BATT position and check the condition of the battery, indicated by the readout meter. Move the INSTR switch to the ON position and allow five minutes for warm-up.

Move the PUMP switch to the ON position, orient the instrument vertically and check the SAMPLE FLOW RATE indicator. The flow meter should read 2 LPM. Check for air leaks by placing a finger over the probe inlet. The flow rate should immediately drop to 0 and remain there until the inlet is reopened.

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Set the CALIBRATE switch to the X10 position. Adjust the meter to read 0 by turning the CALIBRATE knob.

Open the H<sub>2</sub> TANK VALVE and the H<sub>2</sub> SUPPLY VALVE. Never leave the H<sub>2</sub> SUPPLY VALVE open when the pump is not running. Depress the igniter button until the burner lights. A faint "pop" sound can be heard when the flame ignites. Do not depress the igniter button for more than 6 seconds, or damage may occur. If the flame does not ignite, allow the instrument to run for several minutes and again attempt ignition. Ensure that the exhaust port, at the base of the side pack, is not obstructed.

Performing an instrument response verification is a quick and simple method of determining whether the flame is lit. With the CALIBRATE switch set to X1, hold the probe inlet next to the tip of a magic marker. The readout needle should deflect full scale within 2 seconds.

Zero out the background with the instrument located in the cleanest area, representative of the lowest ambient background concentration to be surveyed. Set the CALIBRATE switch to X1 and adjust the meter to read 1 ppm by turning the CALIBRATE ADJUST knob. Remember to subtract 1 ppm from subsequent readings.

### 6.0 Calibration

The OVA should be calibrated at the beginning of each daily use. Set the CALIBRATE range selection switch to the appropriate setting based on the calibration gas being used. With the instrument in operation and ambient background zeroed out, draw a sample of the calibration gas into the probe. Connect the pickup fixture to the gas cylinder regulator in order that the gas is delivered to the instrument at atmospheric pressure (Figure 6-1).

The calibration gas bottle regulator should be adjusted to deliver at a rate of approximately 2.5-3 liters per minute. During calibration there should be a slight positive pressure from the vent line of one leg of the t-fitting. Turn the GAS SELECT knob so that the meter reads the concentration of the calibration gas, gas mixture, or the equivalent concentration of methane (if the OVA is being calibrated to methane, as is usually the case).

Record the GAS SELECT knob setting in the field log. Also, record the calibration gas used, the compound to which the OVA is calibrated, the OVA readings and whether adjustment is necessary.

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### 7.0 Operation

The side pack assembly is equipped with a handle and a shoulder strap for carrying. The probe/readout assembly is hand held, positioning the pickup fixture at the points of interest.

Readings should be taken with the CALIBRATE switch set to the lowest possible range, switching to higher ranges as greater concentrations of vapor emissions are encountered.

When organic vapors are detected, the meter pointer will move upscale, indicating the equivalent concentration of the compound which the instrument is calibrated to.

Record the meter readings and sample locations in the field log. Instrument response verifications (magic marker test) should be performed occasionally and recorded.

### 8.0 Shut Down Mode

The following procedure should be used to put the instrument in the shut down mode:

- Close the H<sub>2</sub> SUPPLY VALVE
- Close the H<sub>2</sub> TANK VALVE
- Move the INSTR switch to OFF.
- Wait 5 seconds and move the PUMP switch to OFF.

### 9.0 Fuel Refilling

The instrument must be in the shut down mode before refilling the fuel tank. Refilling should be done in an area that is well ventilated and free of potential ignition sources.

**WARNING:** The contents of the hydrogen supply bottle are highly pressurized and extremely flammable. Be cautious.

Connect the filling hose to the hydrogen recharge tank. Turn the FILL/BLEED valve on the hose to the OFF position. Attach the other end of the hose to the refill fitting on the side pack assembly.

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Open the supply bottle valve slightly, turn the FILL/BLEED valve to BLEED just momentarily, then turn the FILL/BLEED valve back to OFF. A hissing sound should be heard as the air inside the hose is forced out and replaced with hydrogen.

With the recharge bottle valve opened, open the REFILL VALVE and the H<sub>2</sub> TANK VALVE on the instrument panel. Turn the FILL/BLEED valve to FILL. The pressure in the instrument fuel tank is now indicated on the H<sub>2</sub> TANK PRESSURE gauge. Approximately 150 psi is required for each hour of operation. After the instrument fuel tank is filled, close the REFILL VALVE, the H<sub>2</sub> TANK VALVE, the recharge bottle valve, and turn the FILL/BLEED valve to OFF.

Depressurize the filling hose by turning the FILL/BLEED valve to BLEED then back to OFF. Disconnect the filling hose from the instrument.

With the instrument in the shut down mode, observe the H<sub>2</sub> TANK PRESSURE gauge to see if the pressure decreases rapidly. If the pressure drops more than 350 psi/hr, there is a significant leak in the H<sub>2</sub> supply system.

#### 10.0 Battery Recharging

Battery charging should be done in a non-hazardous area. Plug the charger BNC connector into the mating connector on the battery cover. Insert the AC plug into a 60Hz 115 VAC electrical outlet. Move the battery charger switch to ON. The light above the switch should illuminate.

Battery charge condition is indicated by the meter on the front panel of the charger. The pointer will deflect to the right when charging, and will be in line with the CHARGED marker above the scale when fully charged.

Approximately one hour of charging time is required for each hour of operation. Overnight charging is recommended. The charger can be left on indefinitely without damage.

When finished, move the charger switch to OFF and disconnect from the side pack assembly.

#### 11.0 Documentation

Safety and survey monitoring with the OVA will be documented in a bound field log book and retained in the project files. The following information is to be recorded:

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Organic Vapor Analyzer in the Survey Mode

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- Project name and number.
- Operator's signature.
- Date and Time of operation.
- Calibration gas used, the compound which the instrument is calibrated to, and the GAS SELECT setting.
- Meter readings (monitoring data obtained) and location of points surveyed.
- Instances of erratic or questionable meter readings, and corrective actions taken.
- Instrument response verifications - magic marker (Section 5) or similar test.

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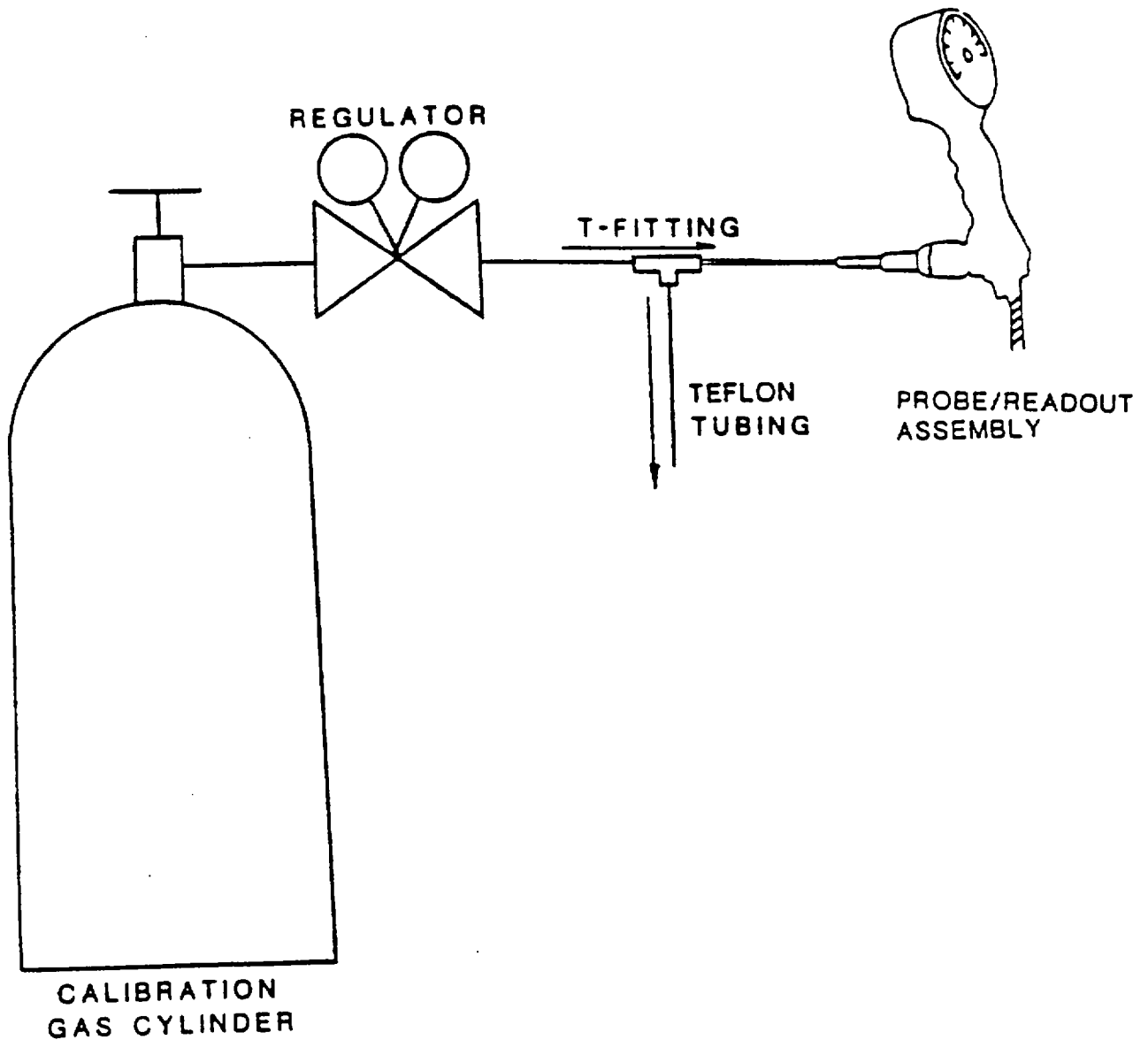
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FIGURE 6-1



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Title: Operation/Calibration of HNU Photoionization  
Analyzer

## 1.0 Introduction

The HNU is primarily used by ERT personnel for safety and survey monitoring of ambient air, determining the presence of volatiles in soil and water, and detecting leakage of volatiles.

Personnel responsible for using the HNU should first read and thoroughly familiarize themselves with the factory operator instruction manual.

## 2.0 Principle of Operation

The HNU is a non-specific vapor/gas detector. The hand-held probe houses a photoionization detector (PID), consisting of an ultraviolet (UV) lamp and two electrodes, and a small fan which pulls ambient air into the probe inlet tube. All organic and inorganic vapor/gas compounds having ionization potentials (IP) lower than the energy output of the UV lamp are ionized; and the resulting potentiometric change is seen as a needle deflection, proportional to vapor concentration, on the potentiometer of the readout/control box.

## 3.0 Specifications

Detection range*:	0.1 to 2,000 ppm.
Linear range*:	0.1 to 400 ppm.
Response time:	3 seconds to 90% full scale deflection.
Operating temperature:	-10°C to 40°C.
Operating time on battery, continuous use, without recorder:	approximately 10 hours; at lower temperatures time is reduced.
Recharge from full discharge:	full recharge 12-14 hours.

\* When equipped with 10.2 eV probe with SPAN set at 9.8 and measuring benzene. Values may vary for other compounds and conditions.

## 4.0 Required Materials

- Calibration Gas: Compressed gas cylinder of isobutylene in air or similar stable gas mixture of known concentration. The selected gas should have an ionization potential similar to that of the

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vapors to be monitored, if known. The concentration should be at 50-75% of the range in which the instrument is to be calibrated.

- Regulator for calibration gas cylinder
- Approximately 3-4 feet of teflon tubing
- "Magic Marker"

### 5.0 Preliminary Steps

Preliminary steps (battery charging, check-out, calibration, maintenance) should be conducted in a controlled or non-hazardous environment.

The sensor probe is carried separately in the instrument carrying case. For most safety and survey work, the 10.2 eV probe is used, as it detects more compounds than the 9.5 eV probe and is more durable than the 11.7 eV probe. Unclamp the cover from the readout/control box and remove the inner lid from the cover. Screw the inlet tube onto the sensor probe. Attach the probe cable plug to the 12 pin keyed socket on the readout panel by matching the alignment slot in the plug to the key in the connector, and screwing down the probe connector until a distinct snap and lock is felt.

Turn the function switch to the BATT (battery check) position. The meter needle will deflect to the green zone if the battery is fully charged. If the needle is below the green arc or if the low battery indicator comes on, the battery must be recharged (Section 9.0) before the analyzer is used.

Turn the function switch to the STANDBY position and allow the electronics to warm up for five minutes. Next turn the ZERO adjustment knob until the meter needle is at zero.

### 6.0 Operation

Turn the function switch to the appropriate range. Check to see if the intake fan is functioning; if so, the probe will vibrate slightly and a distinct sound will be audible when holding the probe casing next to the ear. Also, verify that the UV lamp is on by briefly looking into the probe from a distance greater than six inches to observe a purple glow.

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Title: Operation/Calibration of HNU Photoionization  
Analyzer

**WARNING:** Continued exposure to ultraviolet energy generated by the light source can be harmful to eyesight.

At the beginning of each day, check the calibration (Section 7.2) and make adjustments if necessary (Section 7.3). Record the calibration information in the field log book.

The instrument is now operational. Readings should be taken on the lowest possible scale and recorded in the field log book.

When the HNU is not being used or between monitoring intervals, the function switch should be set on the STANDBY position to conserve battery power and UV lamp life.

At the end of each day, recheck calibration (Section 7.2) and record the information in the field log book.

To shutdown the HNU, turn the function switch to OFF.

Recharge the battery after each use (Section 9.0).

When transporting, disconnect the probe cable connector from the control panel and return the instrument to its stored condition.

## 7.0 Calibration Procedures

### 7.1 Start-Up

Battery Check (Section 5.0).

Zero Set (Section 5.0).

For measurement on the 0-20 or 0-200 ranges only one calibration gas standard is required. Calibration on the 0-200 range will provide accurate values on the 0-20 range as well. Connect the probe tip to the gas cylinder regulator, observing safety precautions, in order that the gas is delivered to the probe at atmospheric pressure (Figure 7-1). A t-fitting and plastic tubing can be used. Adjust the regulator so that the gas is delivered at 150-200 cubic centimeters per minute. The fan inside the probe draws approximately 100 cc/min.

### 7.2 Calibration Check

Set the function switch to the proper range setting, based on the calibration gas used, and record the meter reading in the field log book. Also record the calibration gas composition and concentration, the date and the time.

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Title: Operation/Calibration of HNU Photoionization  
Analyzer

### 7.3 Calibration Adjustment

If adjustment is necessary, turn the span as required to read the ppm concentration of the gas standard, or the equivalent concentration of benzene if the HNU is being calibrated to benzene.

Recheck the zero setting (Section 5.0)

If readjustment of the zero setting is necessary, repeat the span adjustment. Record the span setting and the new meter reading. Whenever the span is changed, the zeroing procedure should be repeated.

If calibration cannot be achieved or if the span setting resulting from calibration is 0.0, then the lamp must be cleaned (Section 10.0).

### 7.4 Alternate Calibration Technique

It may be more convenient in certain circumstances to employ the use of a Tedler bag filled with calibrant instead of a calibration cylinder. In that case, the bag (usually 3-10 liter capacity) should be filled with the appropriate calibrant and brought to the HNU. The HNU probe should be connected to the discharge fitting on the bag using a piece of flexible tubing. Allow the HNU to draw the calibrant from the bag and follow the instructions as indicated in 7.2, 7.3.

### 8.0 Troubleshooting Tips

One convenient method for periodically confirming instrument response is to hold the sensor probe next to the tip of a magic marker. A significant needle deflection should be observed within 3 seconds with the function switch set at 0-20 (after shave lotion or cologne also will make the needle deflect).

Air currents or drafts in the vicinity of the probe tip may cause fluctuations in readings.

A fogged or dirty lamp (Section 10.0), due to operation in a humid or dusty environment, may cause erratic or fluctuating readings.

Moving the instrument from a cool or air-conditioned area to a warmer area may cause moisture to condense on the UV lamp and produce unstable readings (Section 10.0).

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Analyzer

A zero reading on the meter should not necessarily be interpreted as an absence of air contaminants. The detection capabilities of the HNU are limited to those compounds which will be ionized by the particular probe used.

Many volatile compounds have a low odor threshold. A lack of meter response in the presence of odors does not necessarily indicate instrument failure.

If a negative deflection of the HNU meter is noted the ion chamber is dirty and needs cleaning. The chamber may be soaked in a solvent such as methanol in a soil bath air dried and then baked for two to four hours at a temperature of 100°C and not exceeding 105°C.

When high concentrations of hydrocarbons enter the ionization chamber in the HNU a "quenching" effect takes place. Typically, it is noted by a sharp needle movement once the flow of gas is pierced by the HNU probe. Within one to two seconds the needle fades to zero point. To check whether or not the quenching effect is taking place, move the HNU probe to just outside the hole created in the foil. Get another reading after five to ten seconds. If quenching is taking place a very erratic needle movement will occur. Once an operator has seen this phenomena it is fairly easy to recognize.

#### 9.0 Battery Charging

The battery charger is stored inside the instrument cover. To charge the battery, first insert the mini plug of the charger into the jack on the side of the meter, with the function switch in the OFF position. Next, insert the charger plug into a 120VAC single phase, 50-60 HZ outlet. To ensure that the charger is functioning, turn the function switch to BATT. The meter should deflect full scale. The sensor probe cable must be connected to the control panel for a battery check response. For normal battery charging, leave the function switch in the OFF position. The battery is fully charged after 14 hours of charging. The charger can be left on indefinitely without damage. Disconnect the charger from the electrical outlet before disconnecting the mini plug from the instrument.

With the function switch turned to the appropriate range setting, the HNU may be operated while recharging.

#### 10.0 Probe Cleaning

During periods of operation, moisture, dust, or other foreign matter can be drawn into the probe and form deposits on the surface of the UV lamp and ion chamber. This causes interference with the ionization

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process and produces erroneous readings. This condition is indicated by meter readings that are low, erratic, unstable, non-repeatable, or drifting. In most cases, the following field cleaning procedure is sufficient to correct this condition.

Turn the function switch to the OFF position. Disconnect the probe cable connector at the readout panel. Unscrew the probe inlet tube from the end cap and clean the inside of the tube making sure that the tube is dry and lint-free when finished. A pipe cleaner, or a kim-wipe and piece of wire, can be used. Keeping the probe upright, remove the two screws holding the end cap in place and remove the cap and ion chamber. Place one hand over the top of the lamp housing and tilt slightly. The light source will slide out of the housing. Take care not to lose or misplace o-rings or other parts. Do not touch the internal parts of the probe, particularly the UV lamp, with the bare hand during cleaning or reassembly. Surgical gloves are recommended. Clean the internal parts with a non-abrasive, lint-free paper towel (e.g., kim-wipe) and reassemble the probe.

#### 11.0 Documentation

Safety and survey monitoring with the HNU will be documented in a bound field log book and retained in the project files. The following information is to be recorded:

- Project name and number.
- Operator's signature.
- Date and time of operation.
- Calibration gas used.
- Calibration check at beginning and end of day (meter readings before adjustment).
- Span setting after calibration adjustment.
- Meter readings (monitoring data obtained).
- Instances of erratic or questionable meter readings and corrective actions taken.
- Instrument response verifications - magic marker (Section 8.0) or similar test.

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STANDARD OPERATING PROCEDURE

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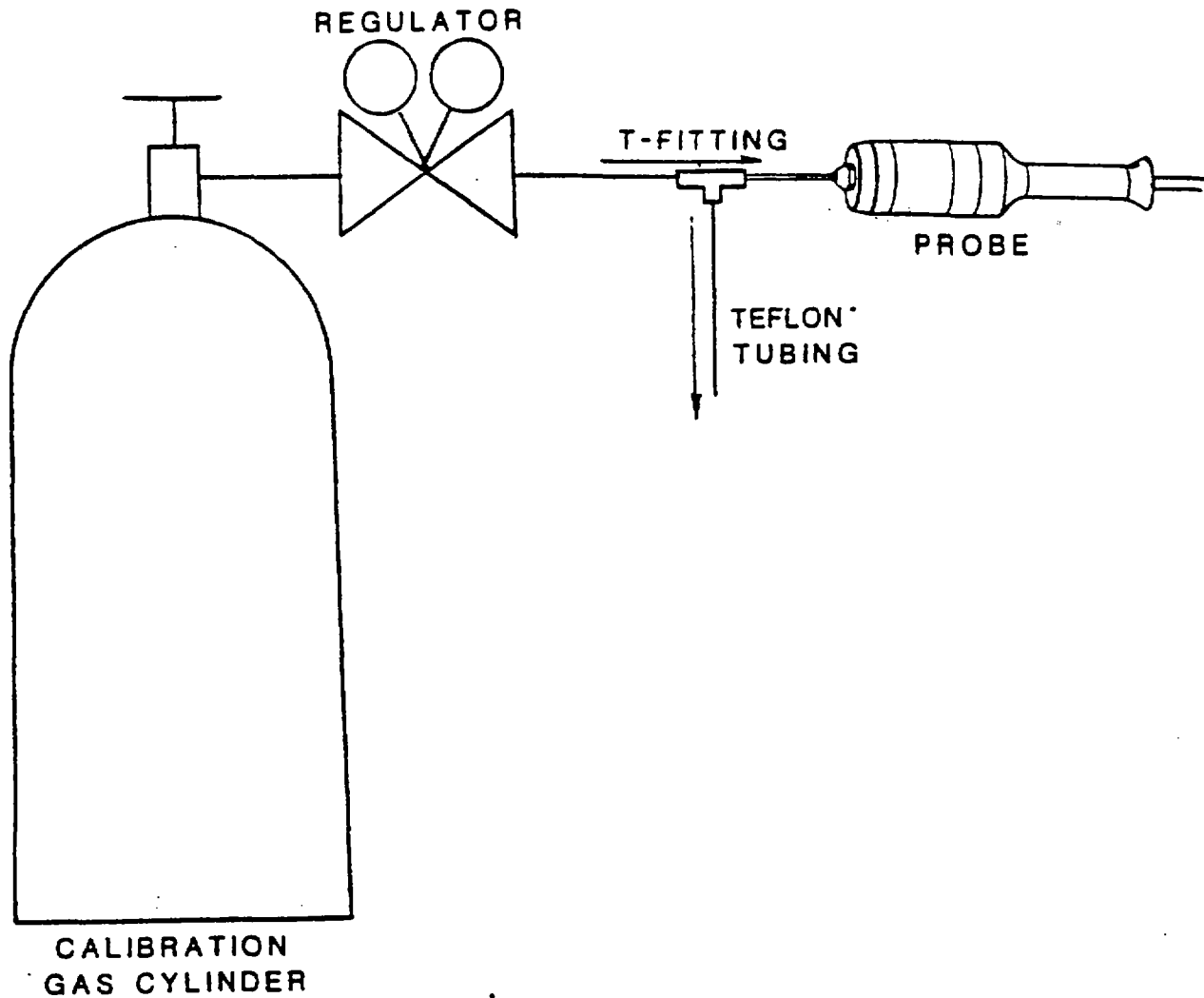
Date: 2nd Qtr. 1987

Title: Operation/Calibration of HNU Photoionization  
Analyzer

Number: 7315

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Figure 7-1



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**ATTACHMENT B**

**BPACC00559F**

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**ENSR**

STANDARD OPERATING PROCEDURE  
DecontaminationDate: 1st Qtr 198  
Number: 7600  
Revision: 1

Title:

## 1.0 General Applicability

This SOP describes the methods to be used for the decontaminization of all field equipment which becomes potentially contaminated during a sample collection task. The equipment may include split spoons, bailers, trowels, shovels, hand augers, or any other type of equipment used during field activities.

Decontamination is performed as a quality assurance measure and a safety precaution. It prevents cross-contamination between samples and also helps to maintain a clean working environment for the safety of all field personnel involved, including the environment.

Decontamination is mainly achieved by rinsing with liquids which include: soap and/or detergent solutions, tap water, deionized water, and methanol. Equipment will be allowed to air dry after being cleaned or may be wiped dry with chemical free cloths or paper towels if immediate re-use is needed.

The frequency of equipment use, dictates that most decontamination be accomplished at each sampling site between collection points. Waste products produced by the decontamination procedures such as waste liquids, solids, rags, gloves, etc. will be collected and disposed of properly based on the nature of contamination. All cleaning materials and wastes should be stored in a central location so as to maintain control over the quantity of materials used and/or produced throughout the study.

## 2.0 Responsibilities

It is the primary responsibility of the site operations manager to assure that the proper decontamination procedures are followed and that all waste materials produced by decontamination are properly stored and disposed of.

It is the responsibility of the project safety officer to draft and enforce safety measures which provide the best protection for all persons involved directly with sampling and/or decontamination.

It is the responsibility of any subcontractors (i.e., drilling contractors) to follow the proper, designated decontamination procedures that are stated in their contracts and outlined in the Project Health and Safety Plan.

It is the responsibility of all personnel involved with sample collection or decontamination to maintain a clean working environment and to ensure that any contaminants are not negligently introduced to the environment.

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# STANDARD OPERATING PROCEDURE

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Title: Decontamination

Date: 1st Qtr 1984  
Number: 760  
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## 3.0 Supporting Materials

- cleaning liquids: soap and/or detergent solutions, tap water, deionized water, methanol
- personal safety gear (defined in Project Health and Safety Plan)
- chemical-free paper towels
- disposable gloves
- waste storage containers: drums, boxes, plastic bags
- cleaning containers: plastic buckets, galvanized steel pans
- cleaning brushes

## 4.0 Methods or Protocol for Decontamination

### 4.1 General Procedures

- 4.1.1 The extent of known contamination will determine to what extent the equipment needs to be decontaminated. If the extent of contamination cannot be readily determined, cleaning should be done according to the assumption that the equipment is highly contaminated until enough data are available to allow assessment of the actual level of contamination.
- 4.1.2 Adequate supplies of all materials must be kept on hand. This includes all rinsing liquids and other materials listed in Section 3.0.
- 4.1.3 The standard procedures listed in the following section can be considered the procedure for full field decontamination. If different or more elaborate procedures are required for a specific project, they will be spelled out in the project work plan. Such variations in decontamination may include following all, just part, or an expanded scope of the decontamination procedure stated herein.

### 4.2 Standard Procedures

- 4.2.1 Remove any solid particles from the equipment or material by brushing and then rinsing with available tap water. This initial step is performed to remove gross contamination.

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## STANDARD OPERATING PROCEDURE

Decontamination

Date: 1st Qtr 1984  
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Title:

- 4.2.2 Wash equipment sampler with the soap or detergent solution.
- 4.2.3 Rinse with tap water
- 4.2.4 Rinse with deionized water
- 4.2.5 Rinse with methanol
- 4.2.6 Repeat entire procedure or any parts of the procedure if necessary
- 4.2.7 Allow the equipment or material to air dry before re-using
- 4.2.8 Dispose of any soiled materials in the designated disposal container

## 5.0 Specific Decontamination Procedures

## 5.1 Submersible Pump

## 5.1.1 Applicability

This procedure will be used to decontaminate submersible pumps between ground-water sample collection points and at the end of each day of use.

## 5.1.2 Materials

- o plastic-nalgene upright cylinder
- o 5-10 gallon plastic water storage containers
- o methanol and dispenser bottle
- o deionized water and dispenser bottle
- o chemical free paper towels

5.1.3.1 During decontamination the submersible pump will be placed on a clean surface or held away from ground.

5.1.3.2 When removing the submersible pump from each well the power cord and discharge line will be wiped dry using chemical-free disposable towels.

5.1.3.3 Clean the upright plastic-nalgene cylinder with first a methanol and then a deionized water rinse, wiping the free liquids after each.

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# STANDARD OPERATING PROCEDURE

Title: Decontamination

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- 5.1.3.4 Reverse pump backwashing all removable residual water present in the pump tubing. The pump should be shut off as soon as intermittent flow is observed from the reverse discharge.
- 5.1.3.5 Rinse the stainless steel submersible down hole pump section with a liberal application of methanol and wipe dry.
- 5.1.3.6 Place the submersible pump section upright in the cylinder and fill the cylinder with tap water, adding 50-100 ml of methanol for every one liter of water.
- 5.1.3.7 Activate the pump in the forward mode withdrawing water from the cylinder.
- 5.1.3.8 Continue pumping until the water in the cylinder is pumped down and air is drawn through the pump. At this time air pockets will be observed in the discharge line. Shut off the pump immediately.
- 5.1.3.9 Remove the pump from the cylinder and place the pump in the reverse mode allowing that all removable water be discharged on to the ground surface as discussed in Step 2.
- 5.1.3.10 Using the water remaining in the cylinder, rinse the sealed portion of the power chord and discharge tube by pouring the water carefully over the coiled lines.
- 5.1.3.11 When reaching the next monitoring well place the pump in the well casing and wipe dry both the power and discharge lines with a clean paper towel as the pump is lowered.

## 5.1.4 Quality Assurance

To assure that decontamination is complete, field blank samples shall be collected using the cleaned submersible pump. These field blanks will be subsequently analyzed for the parameters of interest with respect to the ground water.

The procedure for collecting the field blanks will comprise using the pump to withdraw the tap water used for decontamination, from the plastic cylinder to sample containers. This field blank sample collection procedure shall only be performed after the materials to be used have been decontaminated.

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**ATTACHMENT C**

**BPACC00560**

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**ENSR**

## EMERGENCY RESPONSE CONTACTS AND TELEPHONE NUMBERS

### LOCAL EMERGENCY CONTACTS

Ambulance Service . . . . . 911  
Police . . . . . 911  
Fire . . . . . 911

Hospital: Los Angeles County/  
Harbor UCLA Medical Center . . . . . (213) 533-2345

Location: 1000 W. Carson Street  
Torrance, California

Directions: Head south on Normandie to Carson Street.  
The center is located on the corner of Normandie and  
Carson.

### HAZARDOUS MATERIALS INFORMATION

EHA-INFO . . . . . (800) 342-4636  
Toxline . . . . . (301) 496-1131  
CHEMTREC (24-hour, emergency only) . . . . . (800) 424-9300  
ORNL, Toxicology Information Response Center . . . . . (615) 576-1743  
Poison Control Center . . . . . (800) 682-9211

### ENSR CONTACTS

Rich Richter, Project Manager . . . . . (714) 476-0321  
Mark Wood, Site Manager and Safety Coordinator . . . . . (714) 476-0321  
Alice Armstrong, Regional Health & Safety Mgr . . . . . (805) 388-3775  
Onsite Telephone . . . . . (213) 329-6379

### STANDARD PROCEDURES FOR REPORTING EMERGENCIES

When calling for assistance in an emergency situation, the following information should be provided:

- Name of person making call.
- Telephone number and location of person making call.
- Name of person(s) exposed or injured and location.
- Nature of emergency and type of exposure, when appropriate.
- Actions already taken.

Never hang up first when calling for emergency assistance. Wait for the dispatch operator to finish all questions.

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ATTACHMENT D

BPACC00562

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**ENSR**



HEALTH AND SAFETY PLAN  
SIGNOFF SHEET

for the

AMOCO CHEMICAL COMPANY SITE

TORRANCE, CALIFORNIA

ENSR Project No. 0350-004-100

I have received a copy of the Health and Safety Plan prepared for the above-referenced site. I have read and understand its content, and I agree that I will abide by its requirements.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

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**ENSR**

**APPENDIX B**

**STANDARD OPERATING PROCEDURE 7115**  
**SUBSURFACE SOIL SAMPLING**

**BPACC00564**

### 1.0 General Applicability

This SOP describes the methods used in obtaining subsurface soil samples for identification of soil grain-size distributions, stratigraphic correlations, and chemical analysis (if required). Subsurface soil samples are obtained in conjunction with soil boring and monitoring-well installation programs and provide direct information as to the physical makeup of the subsurface environment. This SOP covers subsurface soil sampling by split-spoon only, as this is the means most often used for obtaining samples from unconsolidated deposits. (See also, SOP 7220 - Monitoring Well Construction).

### 2.0 Responsibilities

It shall be the responsibility of the contract driller to provide the necessary materials for obtaining subsurface soil samples. This includes the split-spoon sampler and sample containers (sized according to project requirements) as well as the appropriate boring logs. It is the contract driller's responsibility to maintain a complete set of boring logs for the record. Standard Penetration Tests (SPT) (ASTM: 1586-67) will be conducted by the contract driller if required by the project. Equipment decontamination shall also be the responsibility of the driller.

It shall be the responsibility of the project geologist/engineer to observe all activities pertaining to subsurface soil sampling to ensure that all the standard procedures are followed properly, and to record all pertinent data on a boring log. It is also the geologist/engineer's responsibility to indicate to the contract driller at what specific depth samples shall be collected. The geologist/engineer will maintain custody of all samples until they are shipped or delivered to their appropriate destination.

### 3.0 Supporting Materials

In addition to those materials provided by the contract driller, the geologist/engineer will provide:

- sample bottles and labels
- boring logs
- field notebook
- chain-of-custody forms and tape

## STANDARD OPERATING PROCEDURE

Title: Subsurface Soil Sampling (Split-Spoon)

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### 4.0 Methods or Protocol for Use

#### 4.1 General Procedures

The sampling depth interval is typically one (1) sample per every five (5) vertical feet with additional samples taken, at the discretion of the project geologist/engineer, when significant textural, visual or odor changes are encountered.

The following are the standard procedures to be used in advancing casing and obtaining soil samples.

Specific requirements described in a project's task plan may call for deviations in the standard procedures but these will be taken into account on a project by project basis. Any deviations from specified procedures will be recorded on the boring log or into a field notebook.

#### 4.2 Standard Procedures - Advancing Casing

- 4.2.1 The casing shall be advanced to the required depth. All loose material within the casing shall be removed prior to sampling. The casing shall be advanced according to project requirements. Borings are typically advanced by two methods, drive-and-wash casing, and hollow-stem augering. The casing shall be of the flush joint or flush couple type and of sufficient size to allow for soil sampling, coring, and/or well installation. All casing sections shall be straight and free of any obstructions. Hollow-stem augers or solid flight augers with casing may be used according to specific project requirements as described in the project task plan. If hollow-stem augers are to be used, the bit shall be equipped with a plug device to be removed at the required sampling depth.
- 4.2.2 For those borings which encounter obstructions, the casing shall be advanced either past or through the obstruction by drilling, mechanically fracturing, or blasting (if required). If the obstruction is bedrock, a rock core shall be taken according to project requirements and following the standard procedures for rock coring (SOP # 7210).
- 4.2.3 The use of recirculated water shall not be permitted when casing is being driven, unless specified in the project task plan, directed and properly documented (in field notebook, logs) by the geologist/engineer.

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## STANDARD OPERATING PROCEDURE

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- 4.2.4 If recirculated water is used all loose material within the casing shall be removed by washing to the required sampling depth using a minimum amount of water. Care shall be taken to limit recirculation of the wash water to those times when the water supply is extremely limited or unavailable.

### 4.3 Standard Procedures - Soil Sampling

- 4.3.1 Subsurface soil samples shall be obtained using a split-tube type sampler (split spoon) having a 2-inch O.D. with a corresponding 1 3/8-inch I.D. and a 18- or 24-inch long sample capacity. It shall be equipped with a ball check valve and may require a flap valve or basket-type retainer for loose-soil sampling. Sampling frequency will be as stated in Section 4.1, or as otherwise specified in the project task plan.
- 4.3.2 Sampling depth shall be independently determined by the inspecting geologist, and any discrepancies shall be resolved prior to obtaining the sample.
- 4.3.3 Samples shall be obtained using the standard penetration test (SPT), which allows for determination of resistance within the deposits. The sampler shall be driven using a 140-pound hammer with a vertical drop of 30-inches using 1 to 2 turns of the rope on the cathead. A certificate indicating exact weight may be required for documentation purposes. The number of hammer blows required for every 6 inches of penetration shall be recorded on the boring log.
- 4.3.4 The sampler shall be immediately opened upon removal from the casing. If the recovery is inadequate, another attempt shall be made before drilling progresses. Adequate recovery should be no less than 12 inches, not including any residual wash material brought up with the sample.
- 4.3.5 The sample shall be split if necessary, placed in the appropriate container, labelled, and placed in the storage box. The boring log and the sample container/label should contain the following information for each sample: site name, boring location, depth, blow counts, recovery, sample number and collection date. The type of material shall be indicated in the boring logs and will be described using the Unified Soil Classification System (ASTM: D2487-69 and D2488-69)..
- 4.3.6 The sampler shall be cleaned with water between attempts in order to prevent cross-contamination. If further decontamination is required, SOP 7600 shall be consulted.

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4.3.7 Proper procedures for delivery to the designated laboratory shall be initiated when all samples are collected. This includes packaging, shipping with sample logs, analysis request forms, and chain of custody forms.

### 5.0 Documentation

Various forms are required to ensure that adequate documentation of each sample is followed and will include:

- sample logs
- boring logs
- chain of custody forms
- shipping forms

In addition, a field log book will be kept as an overall log of all samples collected throughout the study. All documents are retained in the appropriate project files indefinitely. It is important that all field documentation be as complete as possible to ensure traceability (QA/QC requirements).

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**Title: Subsurface Soil Sampling (Split-Spoon)**

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**APPENDIX C**

**STANDARD OPERATING PROCEDURE 7300**  
**FIELD GAS CHROMATOGRAPHY**

**BPACC00570**



Title: Field Gas Chromatography

## 1.0 Purpose and Applicability

This SOP details the considerations necessary to conduct field analytical screening of organic contaminants using a portable gas chromatograph (GC). The scope of this SOP is limited to general procedures necessary to properly understand and organize field screening programs and to ensure that the collected data are of acceptable quality.

## 2.0 Definitions

Gas Chromatography - A method of separating the constituents of a sample for subsequent identification and quantification. A sample is injected into the instrument where it is volatilized and carried through a separating column by an inert carrier gas. Each separated component leaves the column and enters the detector where it creates an electronic signal.

Chromatographic Column - The separation of sample components is achieved in the chromatographic column. The column consists of a tube whose tendency to retain or pass a compound carried into it by a carrier gas stream will vary depending on properties of the compound. The tube may be either glass, stainless steel or Teflon®. Two types of analytical columns exist - packed columns and capillary columns.

Carrier Gas - The gas used to transport a gaseous sample through a chromatographic column to the detector of a gas chromatograph. In the Photovac Model 10S50 this air must contain less than 0.1 ppm total hydrocarbons. This type of gas is commonly referred to as "ultra zero grade" or "hydrocarbon free" air. "Zero grade" air is not recommended by Photovac.

Electron Capture Detector (ECD) - A detector in which a voltage is produced through ionization of a special carrier gas, usually nitrogen or argon/methane, and organic compounds (esp. PCBs, alkyl halides, carbonyls, nitriles, nitrates, and organometals) are detected through their capacity to absorb electrons and therefore impede electrical current. The resulting reduction in electrical current is monitored by an electrometer and is displayed as a positive signal on a meter or strip chart recorder. The detector is virtually insensitive to aliphatic hydrocarbons, alcohols, and ketones.

Title: Field Gas Chromatography

Flame Ionization Detector (FID) - A detector in which molecules are ionized in a hydrogen flame. The ions and electrons formed decrease electrical resistance in a gap between two electrodes and permit the flow of current, which is amplified and displayed on a meter or strip chart recorder.

Photoionization detector (PID) - A detector that uses an ultraviolet light source to ionize individual constituents. Gaseous contaminants are ionized as they emerge from the column and the ions are then attracted to an oppositely charged electrode, resulting in an electrical current which is amplified and measured on a numerical scale (meter readout) or recorded on paper (strip chart).

Headspace - The air space above a soil or aqueous sample in a closed container into which organic compounds can volatilize. For example, when a VOA vial is three quarters filled with water or soil, the remaining quarter of the vial is headspace. The air from the headspace (after agitation) is sampled in the portable GC. Only gaseous headspace (no liquids) normally can be injected into portable GCs because of the absence of heated injection ports. CAUTION: The Photovac 10S00 series of portable GCs cannot accept liquid samples.

Retention Time - The total time required for a chemical component to elute off a chromatographic column. The retention time is measured from the time of injection until detector response.

Standard - A known reference chemical compound. The standard can be in a vapor state in a VOA vial or in a Tedlar® bag. If the portable GC is equipped with heated injection ports, standards in distilled water or methanol can be used. The concentration of the standard is usually known and, if so, can be used to perform quantitative analysis. After the vial has been agitated and the headspace has reached equilibrium with the liquid, a syringe is used to withdraw a predetermined volume of the headspace gas. The headspace aliquot can then be injected onto the column for chromatographic analysis. Comparison of the retention times of the standard to the retention time of unknown sample peaks tentatively identifies the unknown sample peaks.

Muffled Soil - Soil that has been baked in a 400° muffle furnace for 4 hours to remove volatile organics.

Volatile Organic Compounds (VOC) - Hydrocarbon-based chemicals that are characterized by low boiling points and high vapor pressures.

Title: Field Gas Chromatography

Elute - To remove sorbed materials (chemicals) from a sorbent (column) by means of a carrier gas. A compound is said to elute when it emerges from the outlet end of the chromatographic column into the detector.

Ionization Potential (IP) - The energy level at which ionization of a compound occurs. This is generally expressed as electron volts (eV).

### 3.0 Health and Safety Considerations

Health and safety considerations are dependant on site logistics, the nature of the contaminated material, the chemical parameters to be analyzed, and the type of gas chromatograph. The manufacturer's instructions and the project Health and Safety plan should be consulted for specific requirements.

Standard laboratory safety practices should be followed when handling chemicals and using equipment (e.g., syringes, compressed gas cylinders). Appropriate personal protection should be worn when necessary. If a mobile laboratory is used, the laboratory should be adequately ventilated and properly equipped (e.g., fire extinguisher, eyewash, spill kit).

### 4.0 Quality Assurance Planning

The following items depend on site logistics, site-specific chemistry, the nature of the contaminated media to be studied, and the objectives of the study. Each topic must be considered and addressed in the planning of the field program.

Basic Quality Assurance procedures for QC analyses are outlined in Section 9.0.

#### 4.1 Training

All field technicians performing gas chromatography must be properly trained in the chromatographic principles employed, the project data objectives, sample preparation procedures, health and safety procedures and the project QA procedures.

#### 4.2 GC Laboratory Environment

When specific concentration data are needed, non-portable GC equipment can be set up in a mobile laboratory. The mobile laboratory may be inside a van or office trailer. Consequently,

the space which will be available in vehicles at the site must be carefully considered, as it may dictate the type of GC which will be used to perform analyses. Unless mobility is critical to the field program, it is preferable to establish the field laboratory inside a building at the site, if one is available.

Laboratory type gas chromatographs, like other electronic instrumentation, function best in a temperature-controlled environment. The colder the ambient temperature, the longer it takes for the instrument to warm up, and the slower the instrument response time. In addition, operational problems are encountered more frequently at extremely high or low ambient temperatures. It is therefore best to operate the instrument in an environment which comes as close to the range of 55°F - 80°F as possible. If analyses are being performed in the back of a van, it may be necessary to have the vehicle's heat or air conditioning on continuously in order to maintain the air temperature. However, the vehicle's exhaust emissions must be vented away from the analytical activities, or severe background interference may be experienced. For long-term projects conducted in the winter or summer, it may be necessary to conduct analyses in a heated or air-conditioned insulated trailer.

When using laboratory instruments without a heated column in a field office, changes in ambient temperature will result in changes in compound retention times. Therefore, the ambient temperature should be monitored, and precautions taken to minimize fluctuations in the temperature of the operating environment. For instance, the GC should not be placed near the door of the vehicle, near the heating unit, or near the air stream from an air conditioner.

#### 4.3 Calibration Standards

The analysis of standards serves two purposes essential to successful gas chromatography:

- 1) establishment of column retention time windows for target compounds to facilitate their identification; and
- 2) development of response factor data that can be used in quantifying responses observed during sample analyses.

Title: Field Gas Chromatography

To achieve the first objective, standard mixes must contain measurable quantities of all of the compounds to be identified. Further, it must be remembered that slight changes in column conditions (e.g., temperature, carrier gas flowrate) can produce dramatic changes in retention times. Retention time standards should be analyzed frequently if column conditions are not constant.

The second objective requires that the concentrations of the calibration standards be accurately known. For some detectors (e.g., PID) reliable relative response information exists that can be used to determine the response factor of one compound from the response factor of another. For example, if a GC/PID is being used to measure benzene, toluene and xylene, the calibration standard should contain all three compounds, but only the concentration of benzene in the calibrant need be accurately known. Response factors for toluene and xylene can be derived from the benzene response factor using experimentally proven relative response data. This may be done only when reliable relative response data exists.

Standards used in the field should be:

- of the same medium (matrix) as the samples
- in a range of concentrations, such that one standard has approximately the same concentration as is expected in samples, and one standard is just above the expected limit of detection. At least one additional standard having a concentration between the other two should be included to monitor linearity.

When only relative concentration data are needed, such as when performing soil gas sampling, pre-packaged standards may be used. Another approach is to add a known aliquot of a compound of interest (or the actual product being sought in the soil) to a Tedlar bag filled with carrier gas.

#### 4.4 Equipment

##### Instruments

There are numerous gas chromatographs on the market; the choice of instrument will depend on the analytes of interest, field conditions, and space limitations. Instruments not available

Title: Field Gas Chromatography

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within ENSR may be leased from outside vendors. Adequate planning is required in order to be certain that the desired instrument will be available when needed. Portable and transportable gas chromatographs are available with a wide variety of options.

#### Ovens

Analyses can be run on a heated column by using either an isothermal or temperature-programmable oven. Heated columns will shorten analysis time; and since the temperature is held constant, a heated column will help to eliminate the changes in retention times associated with changing ambient air and column temperature. For certain analyses, such as a mixture of PCBs, it is advantageous to use temperature programming during the course of an analysis to decrease the retention time of slow-eluting compounds (e.g., Aroclor 1260).

#### Output

Output from the gas chromatograph can go to either a strip chart recorder or an integrator, either of which may be integral to or separate from the instrument. An integrator offers the advantage of more accurate peak quantitation and the ability to store calibration data. Use of a strip chart recorder necessitates manual measurement of peak heights and retention times, which can be time consuming. In the case of the Photovac Model 10S50, an onboard integrator outputs integrated peak heights in units of millivolts per second.

#### Input

Samples can be introduced into a GC via manual injection with a syringe (for one type of headspace analysis), or through automated sampling devices such as a pump (for air or soil gas sampling) or an auto sampler (for liquid samples in quantity). The device used will depend on the type of analysis being performed.

#### Columns

A packed column consists of a tube packed with an inert solid material supporting a thin film of nonvolatile liquid. Packed columns vary according to their length, diameter, and packing material. Packed columns may be made of teflon, stainless steel, or glass, generally have an outer diameter of 1/4 or 1/8 inch, and

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are usually about 4 to 6 feet in length. Packed columns may be used for either ambient or high temperature analyses; a stainless steel or glass column must be used when the column will be heated.

Capillary columns are composed of fused silica or borosilicate glass, vary in length from 15 to 30 meters, and vary in inner diameter from 0.25 mm to 0.75 mm. Capillary columns are generally used in conjunction with an oven. Capillary columns do not contain a packing material, but rather a thin film or coating on the inner wall which acts similarly to retain compounds in the column. Capillary columns yield sharper peaks and better resolution than packed columns. They are used when it is necessary to attain high resolution of a mixture of different compounds.

It is difficult to predict which type of column will yield a faster analysis time. Analysis time depends on the length and temperature of the column, the flow rate of the carrier gas, and the density of the packing material.

The reader should refer to a catalogue of chromatography supplies (e.g., Supelco), or the specific operating guidelines for the instrument being used, in order to determine which type of column would be most suited to a given application.

#### Detectors

The choice of detector for a given instrument depends on the analytes of interest. Photoionization detectors (PID) are used for analysis of volatile organics, particularly aromatics. Flame ionization detectors (FID) are used for analysis of a wide variety of volatile and semi-volatile organic compounds. Electron capture detectors (ECD) are used for the analysis of halogenated compounds, particularly PCBs, pesticides, and chlorinated solvents. The type of detector desired is likely to be the main factor in determining instrument choice, as many portable field GCs do not have interchangeable detectors.

#### Automatic Programming

The Photovac 10S50 model portable GC is controlled by an onboard computer, programmable by the instrument operator. It is critical to assure that the program being used is compatible with the objectives of the sampling effort.

## 5.0 Responsibilities

The project manager is responsible for:

- organizing all of the instrumentation, supplies, and instruction manuals necessary to conduct analyses in the field;
- ensuring that all personnel scheduled to perform field analyses have been properly trained in sample preparation, instrument operation, and quality assurance procedures;
- maintaining proper records of all field screening data generated;
- ensuring that equipment and procedures are applied in a technically valid manner.

The field technician is responsible for:

- proper operation and calibration of instrumentation in accordance with equipment manuals and the project work plan;
- complete and accurate documentation of field activities, including sampling methods, instrument calibrations, and analysis results.

The equipment coordinator is responsible for:

- Storage of equipment in a limited access area;
- Issuance of equipment to project personnel;
- Maintenance of equipment in accordance with the manufacturer's recommended schedule and procedures;
- Documentation of equipment repairs, preventive maintenance, and use.

## 6.0 Applications

Common applications of field screening using portable gas chromatographs are air monitoring, soil gas monitoring, and screening of soil and water samples. Headspace analysis can be used during drilling of monitoring wells to obtain information about the vertical distribution of contaminants. Analysis of ambient, or breathing zone air samples can be used to monitor the safety of personnel in a work area. Screening of volatiles in soil is of use during soil excavation, as it provides an onsite determination of when the excavation has reached an acceptable level of contamination (contaminant concentration). In some cases it is also practical to use similar methods in combination with simple extraction procedures to screen for certain semi-volatile compounds (eg., PCBs).



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Soil gas sampling can be accomplished using a specially designed vapor probe which is manually inserted into the soil. This technique is useful in cases where heavy equipment used to conduct soil borings would not be appropriate. This type of field screening is useful for determining the relative contaminant concentrations (nondetectable, low, medium, high) at sites. This is a cost-effective approach to collecting data for detecting volatile contamination and for directing soil boring locations.

Field screening data are best used to determine the presence or absence of detectable quantities of certain materials, and to develop general information about their distribution at a site. Limitations inherent in field screening techniques include the following:

- This method does not provide definite identification of specific constituents (compound-specific data).
- Generally, only qualitative or semi-quantitative screening data can be obtained. Preparation and analysis of accurate standards can be difficult under field conditions.

Sample concentrations obtained through field screening with a portable gas chromatograph usually must be considered approximate, as they may vary dramatically from the "true" sample concentration, particularly near the detection limit.

If the gas chromatograph is equipped with an oven that controls column temperature, quantitative data can be obtained through careful calibration with certified standards.

#### 7.0 Required Materials

The following list identifies the type of equipment and supplies which may be necessary to use gas chromatography in the field. Exact equipment needs will be project-specific and will be detailed in the technical instructions for each type of analysis and in the project-specific work plan. This will be particularly true for mobile laboratories.

- Portable gas chromatograph
- flowmeter
- carrier gas, with <0.1 ppm total hydrocarbons (usually in compressed gas cylinders)
- 2-stage regulator, or fill tube

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- syringes (liquid and gas-tight with side-port needles)
- VOA vials for headspace analysis
- pre-prepared standards (air, headspace, or liquid)
- notebook for chromatograms
- thermometer (0-100°C)
- external battery for GC
- Tedlar bags
- soil gas probe and connective Teflon tubing

## 8.0 Procedures

### 8.1 Preparation of Standards

#### 8.1.1 Air Standards

It is necessary to use an air standard when analyzing air samples or performing soil gas surveys. Air standards can either be made up by the GC operator, or purchased in pre-made calibrant gas canisters from a manufacturer. Pre-made calibrants in compressed gas cylinders are desirable, but often cannot be obtained for the appropriate compound(s) in the desired concentrations. It is often necessary to prepare calibrants in the field.

The technique of making air standards requires the use of a Tedlar gas-tight bag, a liquid syringe, a supply of high-purity compressed air (ultra-zero air), a flowmeter, a calculator, and a supply of the volatile organic compound of interest. This method is only feasible for standards containing volatile organic solvents, as the liquid must completely volatilize once it is injected into the bag.

Using this method, the Tedlar bag (or equivalent container from which samples can be taken with a syringe) is filled with a known quantity of high-purity air. To measure the quantity, the air should be fed from the compressed gas cylinder or pump through a flowmeter (e.g., dry gas meter), then through a charcoal column and into the bag. A dry gas meter will provide a direct volume measurement and does not require power. A known volume of clean air can also be obtained by using a calibrated battery-operated constant-flow pump (e.g., a personal sampling pump) to pump air through a charcoal column and into the Tedlar bag. Here, the volume is measured by pumping at a known flowrate for a known time interval, measured with a stopwatch. A third option is to use a calibrated critical orifice

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between the compressed gas cylinder regulator and the Tedlar bag. As long as sufficient pressure drop across the critical orifice is maintained throughout, the orifice's calibrated flowrate and the time interval (measured by stopwatch) will dictate the known volume.

A known quantity of the compound of interest is then injected into the bag and allowed to volatilize. The desired volume of standard is then withdrawn from the sampling port in the bag using a gas-tight syringe, and injected into the GC; or by connecting the bag directly to the calibrant intake on the GC (Photovac) with teflon tubing.

The problem with making standards in this manner is that it is difficult to ensure the standard concentration accuracy. The gas-tight bags may leak, or may be permeable to some gas constituents, and therefore may degrade with time. It is prudent to make up a fresh standard each day, and even so, a change in standard concentration may be noticed through the course of a day. In addition to inaccuracies due to the leaks and permeabilities, the actual amount of liquid solvent injected into the bag may vary due to a small amount of evaporation from the syringe needle before it is injected into the bag, or incomplete delivery of the solvent from the syringe.

The equation used to calculate the volume of a liquid standard that must be injected into a tedlar bag to produce the desired concentration gas standard is expressed as the following:

$$I = \frac{T \times M \times V_s}{D \times V_{m_1}} \times 10^{-3}^*$$

where: I = the required injection volume in  $\mu\text{L}$   
T = the target concentration in ppm  
M = the molecular weight in g/mol  
 $V_s$  = the system (tedlar bag) volume in L  
D = the density of the liquid compound in g/ml  
 $V_{m_1}$  = the molar volume L/mol

\*see figure 2 for derivation of calculation

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Note 1: The molar volume must be corrected for temperature and pressure using the Ideal Gas Law,  $PV=RT$ . For example, the molar volume of any gas at 25°C and 1 atm (STP) is:

$$V = \frac{RT}{P}$$

where: V = volume L/mole  
R = universal gas constant =  
(0.08206 liter atm/mol k)  
P = pressure = atm  
T = temperature degrees Kelvin

$$= \frac{(0.08206 \text{ liter atm/mol k}) (298.15 \text{ k})}{1 \text{ atm}}$$
$$= 24.47 \text{ L/mole}$$

The following is an example calculation to determine the volume of liquid trichloroethylene (TCE) that must be injected to produce a concentration of 25 ppm in a 10-L Tedlar bag.

Density of TCE = 1.4642 g/mL  
Molecular weight of TCE = 131 g/mol  
Temperature = 25°C  
Pressure = 1 atm  
Target concentration = 25 ppm  
Tedlar bag volume = 10 L

$$I = \frac{(25) \times (131) \times (10)}{(1.4642) \times (24.47)} \times 10^{-3} = 0.91 \mu\text{L}$$

Therefore the injection volume necessary to prepare 10 liters of a 25 ppm standard of TCE at 25°C and 1 atm would be 0.91  $\mu\text{L}$ .

#### 8.1.2 Headspace Standards

Aqueous headspace standards must be used when conducting headspace analysis on water or soil. Headspace analysis can only be used when analyzing for volatile organics,

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since these are the only compounds which will volatilize into the headspace in sufficient quantity for analysis at ambient conditions.

Aqueous headspace standards are made by mixing a known quantity of solvent(s) into a known quantity of deionized water or muffled soil. A 40-ml VOA vial is then filled with this standard, and using a plastic syringe, 10 ml of the liquid is withdrawn to create a 10 ml (25%) headspace in the vial. The vial should then be shaken for one minute prior to use as a calibrant to drive the volatiles into the headspace. Headspace standards are typically used in conjunction with soil sampling headspace analysis.

#### 8.1.3 Liquid Standards (Solvent Extracts)

Liquid standards are made by mixing a known quantity of the compounds of interest in the appropriate organic solvent to simulate a solvent extract. This type of standard is used in semi-volatile organics analyses, because it is a solvent extract (compounds of interest dissolved in solvent) that is injected into the GC to analyze these samples. This kind of analysis should never be attempted with a Photovac 10S series GC, but can be performed with a Foxboro OVA in GC mode.

#### 8.2 Instrument Calibration

At a minimum, standards should be analyzed at the beginning and end of each day of analysis. When specific concentrations are sought standards should also be analyzed every 2-3 hours over the course of the day, to check instrument response and determine if retention times have drifted. Samples should be quantitated using the standard which was run closest in time to the sample. The frequency of analysis of standards should be increased if instability is observed in the column or detector due to varying environmental conditions.

When quantitative (i.e., specific concentration) results are desired, it is necessary to calibrate the instrument with a range of standard concentrations, in order to check the linearity of the instrument response. If the instrument response is not linear, (i.e., increasing standard concentrations do not produce a

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proportionate increase in peak height) then samples should be quantitated using the response factor derived from the standard which is closest in concentration to the sample.

Duplicate injections of the standard should be made at the beginning of each day to check for reproducibility. Standard chromatograms should have duplicate peak heights (or areas, when an integrator is used) within 20% of each other and retention times within 5% of each other. If this stability goal is not achieved, causes of the instability, such as room temperature fluctuations or instrument malfunctions should be found and corrected.

For accurate sample quantitation, it is important that standards, samples, and blanks be run with the same instrument parameters; therefore, standards should be rerun each time an instrument parameter (e.g., column or detector temperature, event settings, etc.) is changed.

### 8.3 Sample Analysis

Sample analysis methods vary according to the sample matrix and the requirements of the projects. Detailed procedures are described in the technical instructions for each type of analysis and in the project-specific work plan.

## 9.0 Quality Control Checks and Acceptance Criteria

### 9.1 Blanks

Blanks are run as a quality control measure, in order to show that any contamination detected in a sample is truly native to the sample and has not been introduced by the operator (via a dirty syringe or contaminated solvents) or the instrument (via contaminated inlet lines).

- Syringe Blanks are used when air or headspace samples are being introduced into the instrument via manual injection. A known quantity of the ambient air is injected into the instrument, using the same syringe as was used for the samples. Alternatively, syringe blanks may be obtained by withdrawing air from an empty pre-cleaned VOA vial or other supply of clean air if the ambient air is suspected of

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contamination. Syringe blanks should be run at the beginning of each day and after every contaminated sample, in order to insure that no contaminants remain in the syringe before the next sample is run. Chromatograms for blanks should be void of any peaks. If peaks appear in the blank chromatogram, the syringe should be flushed out a few times with clean air and the blank injection repeated. If the problem is then not rectified, the syringe should be cleaned or a new syringe used. In the latter case, use of a new syringe should begin with a syringe blank.

- Air Blanks are used for ambient air monitoring and for soil gas sampling. Air blanks may consist of ambient air or hydrocarbon-free air. Air blanks should be run before each soil gas sample to ensure the sampling train and instrument are clean.
- Reagent Blanks (or solvent blanks) are used when solvent extracts are analyzed, as in the case of PCBs or other semi-volatile compounds. A reagent or solvent blank is simply an injection of "clean" solvent to ensure that contaminants are not present as impurities in the solvent being used for extractions. Obviously any contamination introduced via the syringe or any other transfer vehicle will also be detected by a solvent blank. As in the case of syringe blanks, the blank chromatogram should be free of peaks other than the solvent peak itself.

## 9.2 Field Duplicates

A duplicate (repeat) analysis of at least one contaminated sample (i.e., a sample that contains measurable quantities of target compounds) should be performed each day to monitor and assure the precision of the analytical method.

In addition, it is prudent to perform replicate injections of a sample containing measureable quantities over a period of time to detect degradation of samples over time. This is essential if significant time may elapse between collection and analysis of samples.

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10.0 Documentation

The chromatograms for a group of samples should be labeled at the beginning of the day with the following information:

- site name
- project number
- date analyzed
- analyst name
- instrument
- column used
- carrier gas specifications
- carrier gas flowrate
- column temperature setting (if controlled)
- chart speed (cm/hr)
- chart input (V)
- program used (Photovac 10S50)
- map or sketch showing sampling points

Each individual chromatogram during the course of the day should be labeled with the following information:

- sample identification or number
- gain or attenuation
- injection volume ( $\mu\text{L}$ )
- time of injection
- ambient temperature during analysis
- flowmeter readings

Peaks in the sample chromatogram should be labeled if they can be tentatively identified based on comparison with a known reference standard.

Chromatograms should be pasted or taped to the Field Record Log (Figure 1) in a bound notebook. The table of contents in this notebook should consist of a sample sequence log, which lists each sample analyzed (by ID no.) and the date and time of each analysis. An additional column can be used for remarks on any notable properties of the samples (e.g., color, odor, etc).

In addition to the chromatogram notebook, a field logbook must be maintained that documents the chronology of daily events. Information that should be recorded in the logbook includes the instrument



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operator's name; any problems with instrumentation, with explanation of corrective actions; any changes in ambient temperature or the working environment (whether inside or outside); any circumstances of sample collection that might affect the meaning or interpretation of the data; how standards were prepared and analyzed; and any calculations of sample or standard concentrations. Each page in the logbook should be dated and signed by the person making the entry.

#### 11.0 Troubleshooting

The reader should refer to the troubleshooting guide that may be obtained from Supelco.

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Figure 1  
GAS CHROMATOGRAPHY - FIELD RECORD LOG

Project No. \_\_\_\_\_

Page \_\_\_\_\_

SAMPLE INFORMATION

CHROMATOGRAM

Company Name \_\_\_\_\_

Sample No. \_\_\_\_\_

Date \_\_\_\_\_

Time \_\_\_\_\_

Temperature \_\_\_\_\_

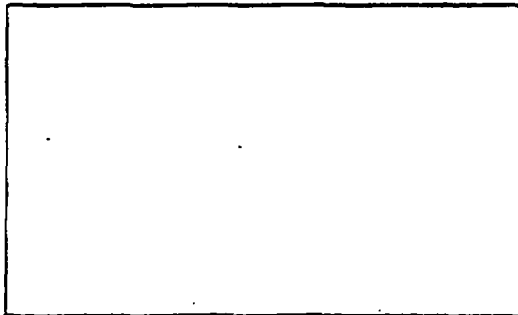
Sample Depth (ft) \_\_\_\_\_

Instrumental Gain \_\_\_\_\_

Sample Location \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Location Sketch



Signature \_\_\_\_\_

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Figure 2

## DERIVATION OF STANDARD CALCULATION

Density of TCE = 1.4642 g/mL

Molecular weight of TCE = 131 g/mol

Target concentration = 25 ppm

Tedlar bag volume = 10 L

$$25 \text{ ppm} = \frac{25 \text{ } \mu\text{L TCE}}{\text{L air}} = \frac{2.5 \times 10^{-5} \text{ L TCE}}{\text{L air}}$$

Therefore, at 25 ppm TCE, the total volume of TCE gas in the 10 L bag will be:

$$\frac{2.5 \times 10^{-5} \text{ L TCE}}{\text{L air}} \times \frac{10}{10} = \frac{2.5 \times 10^{-4} \text{ L TCE}}{10 \text{ L air}}$$

Then the volume of liquid TCE that will occupy  $2.5 \times 10^{-4}$  liters as a gas must be computed using the ideal gas law, which states that in a standard atmosphere at 25°C and 1 atm, one mole of gas occupies 24.47 liters. Thus, the number of moles of TCE in  $2.5 \times 10^{-4}$  liters is:

$$2.5 \times 10^{-4} \text{ L TCE} \times \frac{1 \text{ mole}}{24.47} = 1.02 \times 10^{-5} \text{ moles}$$

Since the density and molecular weight of liquid TCE are known to be 1.46 g/mL and 131 g/mole, respectively, the volume of liquid TCE that must be injected into the Tedlar bag is:

$$\begin{aligned} 1.02 \times 10^{-5} \text{ moles} \times \frac{131 \text{ g/mol}}{1.46 \text{ g/mL}} &= 9.1 \times 10^{-4} \text{ mL} \\ &= 0.91 \text{ } \mu\text{L} \end{aligned}$$

Therefore a 0.91  $\mu\text{L}$  injection of TCE in a 10 L Tedlar bag will result in a TCE concentration of 25 ppm.

**ENSR**

APPENDIX D

STANDARD OPERATING PROCEDURE 7600  
DECONTAMINATION OF EQUIPMENT

BPACC00590

Title: Decontamination

# STANDARD OPERATING PROCEDURE

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## 1.0 General Applicability

This SOP describes the methods to be used for the decontaminization of all field equipment which becomes potentially contaminated during a sample collection task. The equipment may include split spoons, bailers, trowels, shovels, hand augers, or any other type of equipment used during field activities.

Decontamination is performed as a quality assurance measure and a safety precaution. It prevents cross-contamination between samples and also helps to maintain a clean working environment for the safety of all field personnel involved, including the environment.

Decontamination is mainly achieved by rinsing with liquids which include: soap and/or detergent solutions, tap water, deionized water, and methanol. Equipment will be allowed to air dry after being cleaned or may be wiped dry with chemical free cloths or paper towels if immediate re-use is needed.

The frequency of equipment use, dictates that most decontamination be accomplished at each sampling site between collection points. Waste products produced by the decontamination procedures such as waste liquids, solids, rags, gloves, etc. will be collected and disposed of properly based on the nature of contamination. All cleaning materials and wastes should be stored in a central location so as to maintain control over the quantity of materials used and/or produced throughout the study.

## 2.0 Responsibilities

It is the primary responsibility of the site operations manager to assure that the proper decontamination procedures are followed and that all waste materials produced by decontamination are properly stored and disposed of.

It is the responsibility of the project safety officer to draft and enforce safety measures which provide the best protection for all persons involved directly with sampling and/or decontamination.

It is the responsibility of any subcontractors (i.e., drilling contractors) to follow the proper, designated decontamination procedures that are stated in their contracts and outlined in the Project Health and Safety Plan.

It is the responsibility of all personnel involved with sample collection or decontamination to maintain a clean working environment and to ensure that any contaminants are not negligently introduced to the environment.

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BPACC00591

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# STANDARD OPERATING PROCEDURE

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Title: Decontamination

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## 3.0 Supporting Materials

- cleaning liquids: soap and/or detergent solutions, tap water, deionized water, methanol
- personal safety gear (defined in Project Health and Safety Plan)
- chemical-free paper towels
- disposable gloves
- waste storage containers: drums, boxes, plastic bags
- cleaning containers: plastic buckets, galvanized steel pans
- cleaning brushes

## 4.0 Methods or Protocol for Decontamination

### 4.1 General Procedures

- 4.1.1 The extent of known contamination will determine to what extent the equipment needs to be decontaminated. If the extent of contamination cannot be readily determined, cleaning should be done according to the assumption that the equipment is highly contaminated until enough data are available to allow assessment of the actual level of contamination.
- 4.1.2 Adequate supplies of all materials must be kept on hand. This includes all rinsing liquids and other materials listed in Section 3.0.
- 4.1.3 The standard procedures listed in the following section can be considered the procedure for full field decontamination. If different or more elaborate procedures are required for a specific project, they will be spelled out in the project work plan. Such variations in decontamination may include following all, just part, or an expanded scope of the decontamination procedure stated herein.

### 4.2 Standard Procedures

- 4.2.1 Remove any solid particles from the equipment or material by brushing and then rinsing with available tap water. This initial step is performed to remove gross contamination.

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## STANDARD OPERATING PROCEDURE

Title: Decontamination

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- 4.2.2 Wash equipment sampler with the soap or detergent solution.
- 4.2.3 Rinse with tap water
- 4.2.4 Rinse with deionized water
- 4.2.5 Rinse with methanol
- 4.2.6 Repeat entire procedure or any parts of the procedure if necessary
- 4.2.7 Allow the equipment or material to air dry before re-using
- 4.2.8 Dispose of any soiled materials in the designated disposal container

## 5.0 Specific Decontamination Procedures

## 5.1 Submersible Pump

## 5.1.1 Applicability

This procedure will be used to decontaminate submersible pumps between ground-water sample collection points and at the end of each day of use.

## 5.1.2 Materials

- o plastic-nalgene upright cylinder
- o 5-10 gallon plastic water storage containers
- o methanol and dispenser bottle
- o deionized water and dispenser bottle
- o chemical free paper towels

5.1.3.1 During decontamination the submersible pump will be placed on a clean surface or held away from ground.

5.1.3.2 When removing the submersible pump from each well the power cord and discharge line will be wiped dry using chemical-free disposable towels.

5.1.3.3 Clean the upright plastic-nalgene cylinder with first a methanol and then a deionized water rinse, wiping the free liquids after each.

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## STANDARD OPERATING PROCEDURE

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- 5.1.3.4 Reverse pump backwashing all removable residual water present in the pump tubing. The pump should be shut off as soon as intermittent flow is observed from the reverse discharge.
- 5.1.3.5 Rinse the stainless steel submersible down hole pump section with a liberal application of methanol and wipe dry
- 5.1.3.6 Place the submersible pump section upright in the cylinder and fill the cylinder with tap water, adding 50-100 ml of methanol for every one liter of water.
- 5.1.3.7 Activate the pump in the forward mode withdrawing water from the cylinder.
- 5.1.3.8 Continue pumping until the water in the cylinder is pumped down and air is drawn through the pump. At this time air pockets will be observed in the discharge line. Shut off the pump immediately.
- 5.1.3.9 Remove the pump from the cylinder and place the pump in the reverse mode allowing that all removable water be discharged on to the ground surface as discussed in Step 2
- 5.1.3.10 Using the water remaining in the cylinder, rinse the sealed portion of the power chord and discharge tube by pouring the water carefully over the coiled lines.
- 5.1.3.11 When reaching the next monitoring well place the pump in the well casing and wipe dry both the power and discharge lines with a clean paper towel as the pump is lowered.

## 5.1.4 Quality Assurance

To assure that decontamination is complete, field blank samples shall be collected using the cleaned submersible pump. These field blanks will be subsequently analyzed for the parameters of interest with respect to the ground water.

The procedure for collecting the field blanks will comprise using the pump to withdraw the tap water used for decontamination, from the plastic cylinder to sample containers. This field blank sample collection procedure shall only be performed after the materials to be used have been decontaminated.

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APPENDIX E  
STANDARD OPERATING PROCEDURE 7510  
PACKAGING AND SHIPMENT OF SAMPLES

BPACC00595

Title: Packaging and Shipment of Samples

### 1.0 Applicability

This Standard Operating Procedure (SOP) is concerned with procedures associated with the packaging and shipment of samples. Two general categories of samples exist: environmental samples consisting of air, water and soil; and waste samples which include non-hazardous solid wastes and hazardous wastes as defined by 40 CFR Part 261.

### 2.0 Responsibilities

It is the responsibility of the project manager to assure that the proper packaging and shipping techniques are utilized for each project. The site operations manager shall be responsible for the enactment and completion of the packaging and shipping requirements outlined in the project specific sampling plan. The site operations manager shall be responsible to research, identify and follow all applicable U.S. Department of Transportation (DOT) regulations regarding shipment of materials classified as waste.

### 3.0 General Method

The objective of sample packaging and shipping protocol is to identify standard procedures which will minimize the potential for sample spillage or leakage and maintain field sampling program compliance with U.S. EPA and U.S. DOT regulations.

The extent and nature of sample containerization will be governed by the type of sample, and the most reasonable projection of the sample's hazardous nature and constituents. The EPA regulations (40 CFR Section 261.4(d)) specify that samples of solid waste, water, soil or air, collected for the sole purpose of testing, are exempt from regulation under the Resource Conservation and Recovery Act (RCRA) when all of the following conditions are applicable:

- A. Samples are being transported to a laboratory for analysis;
- B. Samples are being transported to the collector from the laboratory after analysis;
- C. Samples are being stored (1) by the collector prior to shipment for analyses, (2) by the analytical laboratory prior to analyses, (3) by the analytical laboratory after testing but prior to return of sample to the collector or pending the conclusion of a court case.

Qualification for categories A and B above require that sample collectors comply with U.S. DOT and U.S. Postal Service (USPS) regulations or comply with the following items if U.S. DOT and USPS regulations are found not to apply:

BPACC00596

ERT

696 Virginia Road, Concord, Massachusetts 01742

## Title: Packaging and Shipment of Samples

The following information must accompany all samples and will be entered on a sample specific basis on chain of custody records:

- sample collector's name, mailing address and telephone number,
- analytical laboratory's name, mailing address and telephone number,
- quantity of sample,
- date of shipment,
- description of sample, and

in addition, all samples must be packaged so that they do not leak, spill or vaporize.

#### 4.0 General Methods

- 4.1 Place plastic bubble wrap matting over the base and bottom corners of each cooler or shipping container as needed to manifest each sample.
- 4.2 Obtain a chain of custody record as shown in Figure 1 and enter all the appropriate information as discussed in Section 3.0 of this SOP. Chain of custody records will include complete information for each sample. One or more chain of custody records shall be completed for each cooler or shipping container as needed to manifest each sample.
- 4.3 Wrap each sample bottle individually and place standing upright on the base of the appropriate cooler, taking care to leave room for some packing material and ice or equivalent. Rubber bands or tape should be used to secure wrapping, completely around each sample bottle.
- 4.4 Place additional bubble wrap and/or styrofoam pellet packing material throughout the voids between sample containers within each cooler.
- 4.5 Place ice or cold packs in heavy duty zip-lock type plastic bags, close the bags, and distribute such packages over the top of the samples.
- 4.6 Add additional bubble wrap/styrofoam pellets or other packing materials to fill the balance of the cooler or container.
- 4.7 Obtain two pieces of chain of custody tape as shown in Figure 2 and enter the custody tape numbers in the appropriate place on the chain of custody form. Sign and date the chain of custody tape.

EET

696 Virginia Road, Concord, Massachusetts 01742

# STANDARD OPERATING PROCEDURE

Title: Packaging and Shipment of Samples

Page: 3 of 6  
Date: 3rd Qtr. 1986  
Number: 7510  
Revision: 1

- 4.8 To complete the chain of custody form enter the type of analysis required for each sample, by container, under the "ANALYSES" section. Under the specific analysis enter the quantity/volume of sample collected for each corresponding analysis.

If shipping the samples where travel by air or other public transportation is to be undertaken, sign the chain of custody record thereby relinquishing custody of the samples. Relinquishing custody should only be performed when directly transmitting custody to a receiving party or when transmitting to a shipper for subsequent receipt by the analytical laboratory. Shippers should not be asked to sign chain of custody records.

- 4.9 Remove the last copy from the chain of custody record and retain with other field notes. Place the original and remaining copies in a zip-lock type plastic bag and place the bag on the top of the contents within the cooler or shipping container.

- 4.10 Close the top or lid of the cooler or shipping container and with another person rotate/shake the container to verify that the contents are packed so that they do not move. Improve the packaging if needed and reclose.

When transporting samples by automobile to the laboratory, and where periodic changes of ice are required, the cooler should only be temporarily closed so that reopening is simple. In these cases, chain of custody will be maintained by the person transporting the sample and chain of custody tape need not be used. If the cooler is to be left unattended, then chain of custody procedures should be enacted.

- 4.11 Place the chain of custody tape at two different locations on the cooler or container lid and overlap with transparent packaging tape. For coolers with hinged covers, if the hinges are attached with screws, chain of custody tape should also be used on the hinge side.

- 4.12 Packaging tape should be placed entirely around the sample shipment containers. A minimum of one to two full wraps of packaging tape will be placed at at least two places on the cooler. Shake the cooler again to verify that the sample containers are well packed.

- 4.13 If shipment is required, transport the cooler to an overnight express package terminal or arrange for pickup. Obtain copies of all shipment records as provided by the shipper.

- 4.14 If the samples are to travel as luggage, check with regular baggage.

ERT

696 Virginia Road, Concord, Massachusetts 01742

0908J

BPACC00598

STANDARD OPERATING PROCEDURE

Title: Packaging and Shipment of Samples

Page: 4 of 6  
Date: 3rd Qtr. 1986  
Number: 7510  
Revision: 1

---

4.15 Upon receipt of the samples, the analytical laboratory will open the cooler or shipping container and will sign "received by laboratory" on each chain of custody form. The laboratory will verify that the chain of custody tape has not been broken previously and that the chain of custody tape number corresponds with the number on the chain of custody record. The analytical laboratory will then forward the back copy of the chain of custody record to the sample collector to indicate that sample transmittal is complete.

5.0 Documentation

As discussed in Section 4.0 the documentation for supporting the sample packaging and shipping will consist of chain of custody records and shipper's records. In addition a description of sample packaging procedures will be written in the field log book. All documentation will be retained in the project files following project completion.

KRT

696 Virginia Road, Concord, Massachusetts 01742

0908J

BPACC00599

0908J

696 Virginia Road, Concord, Massachusetts 01742

ERT

BPACC00600

## CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location			ANALYSES										REMARKS	
Project No.			Field Logbook No.														
Sampler: (Signature)			Chain of Custody Tape No.														
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample													
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time						
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time						
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature)				Date	Time						
Sample Disposal Method:				Disposed of by: (Signature)				Date	Time								
SAMPLE COLLECTOR				ANALYTICAL LABORATORY				<b>ERT</b>  No 1663									
ERT - A Resource Engineering Company 696 Virginia Road Concord, MA 01742 617-369-8910																	

1974-3-84

Figure 1

Title: Packaging and Shipment of Samples

STANDARD OPERATING PROCEDURE

 Page: 5 of 6  
 Date: 3rd Qtr. 1986  
 Number: 7510  
 Revision: 1

STANDARD OPERATING PROCEDURE

Title: Packaging and Shipment of Samples

Page: 6 of 6  
Date: 3rd Qtr. 1986  
Number: 7510  
Revision: 1

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**ERT**

Date \_\_\_\_\_

Sig. \_\_\_\_\_

Nº 30432

Figure 2

ERT

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0908J

BPACC00601

REPORT OF GROUNDWATER SAMPLING  
AND ANALYSIS  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

BPACC00602





SIMON-EEI Inc.

6695 E. Pacific Coast Hwy  
Long Beach, CA 90803

Telephone (213) 430-6500  
Fax (213) 430-1271

January 21, 1991

Amoco Chemical Company  
1225 West 196th Street  
Torrance, California 90502

Attention: Mr. Robert Dorr  
Environmental Coordinator


Subject: Report of Groundwater Sampling and Analysis  
Amoco Chemical Facility  
1225 West 196th Street  
Torrance, California  
Project No. 512-345

Dear Mr. Dorr:

Presented herewith is the report of groundwater sampling performed by Simon-EEI Inc. This assessment was performed at the request of Amoco, Inc. to monitor the concentration volatile and semi-volatile organic compounds in six groundwater monitoring wells at the subject site.

We trust this report meets your current requirements. Should you have questions regarding the results contained herein, or require further clarification, please contact us. We appreciate the opportunity to be of continued service to Amoco.

Respectfully,

  
William E. Halbert  
Project Hydrogeologist

BPACC00603

REPORT OF GROUNDWATER SAMPLING AND ANALYSIS

AMOCO CHEMICAL COMPANY

TORRANCE, CALIFORNIA

Prepared for:

Amoco Chemical Company  
1225 West 196th Street  
Torrance, California 90502

Submitted by:

Simon-EEI Inc.  
6695 East Pacific Coast Highway  
Long Beach, California 90803  
213/430-6500



William E. Halbert  
Project Hydrogeologist



N. Mark Reese  
Regional Manager  
Southern California

BPACC00604

REPORT OF GROUNDWATER SAMPLING AND ANALYSIS  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

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4	Trichloroethylene Concentrations
5	Tetrachloroethylene Concentrations

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<u>Appendix</u>	<u>Description</u>
A	Laboratory Reports and Chain-of-Custody Form
B	Monitoring Well Hydrographs
C	Graphs of Selected Organic Compounds Over Time

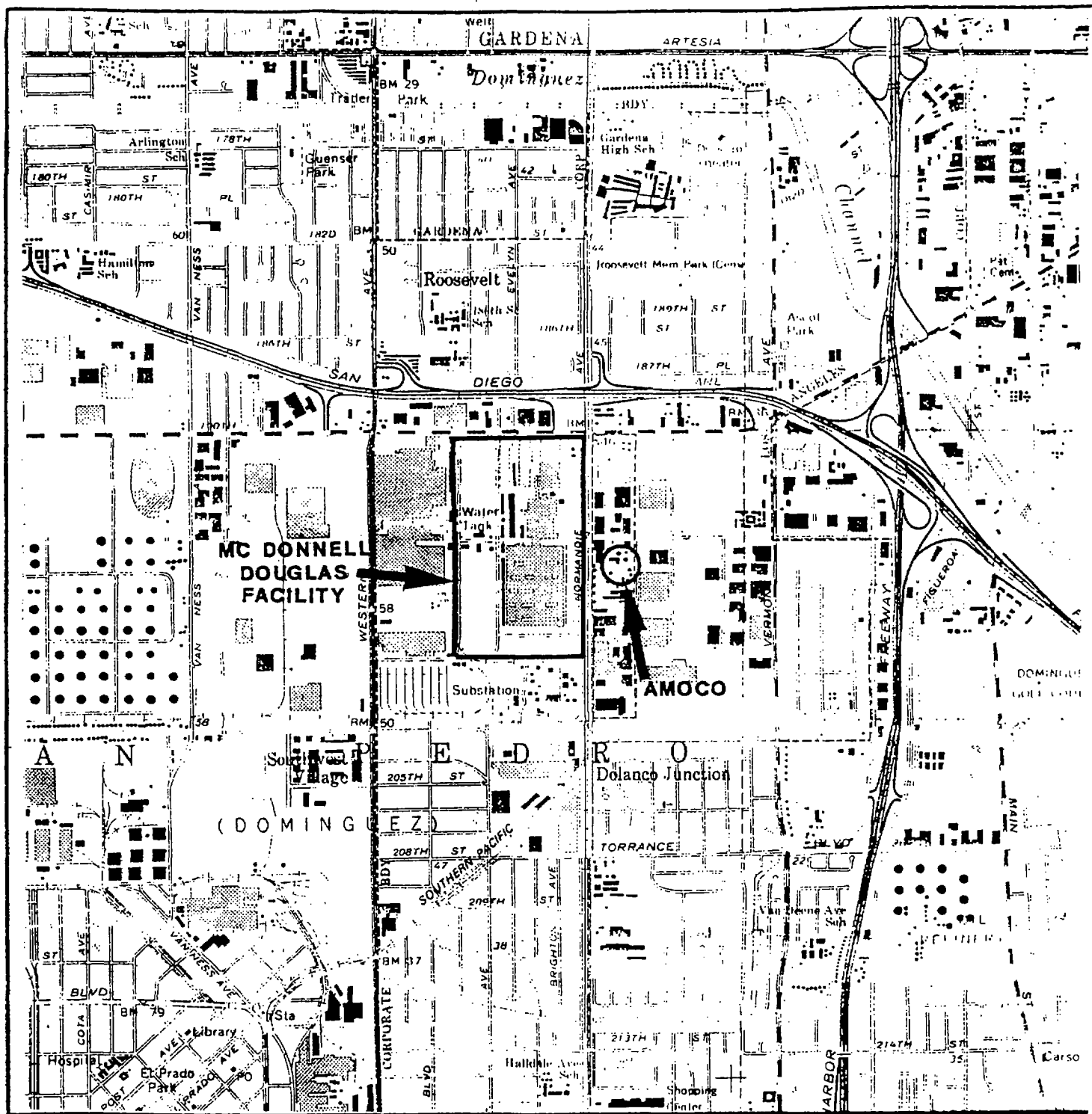
REPORT OF GROUNDWATER SAMPLING AND ANALYSIS  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

1.0 INTRODUCTION

Amoco Chemical Company operates a facility at 1225 West 196th Street, Torrance, California for the conversion of styrene monomer to styrene polymer (Figure 1). Initial groundwater samples were obtained from the six groundwater monitoring wells located onsite in early 1989 and analyzed by Amoco's laboratory in Joliet, Illinois. Results reported verbally by Amoco to Engineering Enterprises, Inc. indicated no organic compounds were detected. Simon-EEI was again requested by Amoco to collect groundwater samples from the wells in February, 1990. Results from this event indicated the presence of volatile organic compounds in all wells. Confirmation sampling and analysis was conducted three weeks after previous event with samples sent to two independent laboratories. Reported results verified the previously reported concentrations. Amoco requested Simon-EEI to conduct groundwater sampling and analysis in December, 1990. This report contains the results of that groundwater sampling event performed by Simon.

2.0 PURPOSE

The purpose of the groundwater sampling was to evaluate the concentration of volatile and semi-volatile organic compounds in groundwater samples collected from onsite monitoring wells.



BPACC0060

0 2000 4000  
SCALE IN FEET

SITE LOCATION MAP  
AMOCO CHEMICAL FACILITY  
TORRANCE, CALIFORNIA

**SIMON-EEI Inc.**

PROJECT NO: 512-345

FIGURE:

DATE: DECEMBER, 1990

1

### 3.0 SCOPE OF WORK

To achieve the purpose stated above, the following scope of work was performed:

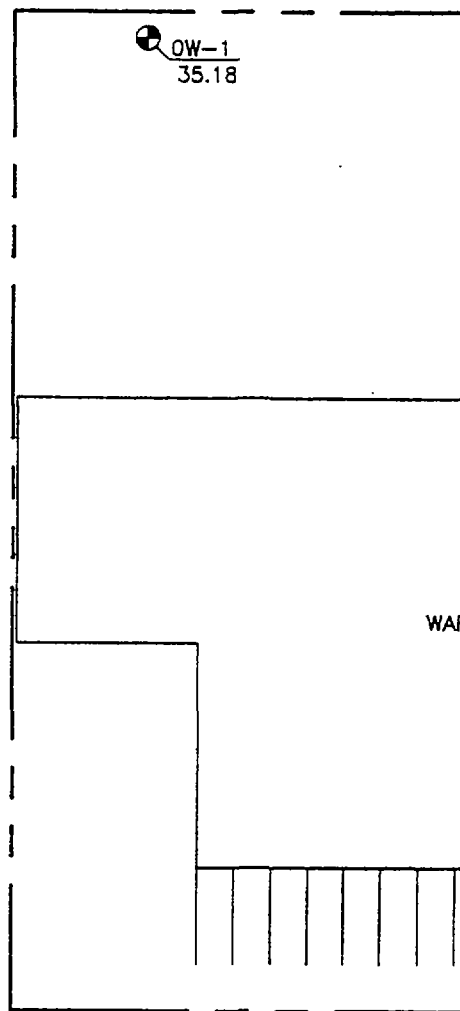
- o Groundwater samples from the six onsite groundwater monitoring wells were collected in accordance with SW846 and EPA protocol;
- o Groundwater samples were chemically analyzed using EPA methods 8240 and 8270 for volatile and semi-volatile organic compounds, respectively; and,
- o This report was prepared to present analytical data and concentration trends over time.

### 4.0 GROUNDWATER SAMPLING METHODOLOGY

Groundwater sampling was conducted on the six groundwater monitoring wells located onsite (Figure 2). Prior to sampling, wells were gauged to identify depth of water, depth of well and volume of water within the well bore. Wells were then purged of at least five well volumes of water using a Teflon bailer. Measurements of temperature, electrical conductivity and pH were taken during the purging process. When five well volumes of water had been purged and three consecutive readings had stabilized to within ten percent of one another, groundwater samples were collected for laboratory analysis.

Groundwater samples were collected using disposable polyethylene bailers fitted with controlled flow emptying devices. Samples were collected into laboratory clean glass vials having lids with Teflon

BPACC00609



OW-3 MONITORING WELL NUMBER  
34.99 RELATIVE GROUNDWATER ELEVATION

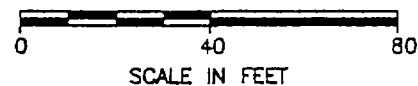
35.10 GROUNDWATER ELEVATION CONTOUR

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTE: 1. Data collected December 6, 1990.  
2. Elevation datum is mean sea level.  
3. Hydraulic gradient = 0.003



BPACC00610



GROUNDWATER ELEVATION CONTOUR MAP  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

2



lined septa and containing hydrochloric acid as a preservative. Samples were transferred from the bailer to the vials using the submerged fill technique. Lids were replaced on the vials and the vials inverted and visually checked for the presence of entrapped air. Samples containing air were uncapped, refilled and rechecked. Samples not containing air had labels affixed which contained the following information: date, samplers initials, job number, well number, sample number and requested analyses. Appropriately sealed and labeled samples were then placed in an ice chest containing frozen blue-ice for transport to the analytical laboratory. A field blank was collected by pouring distilled water into a clean bailer and then decanting the water into sample vials. A blind duplicate sample was collected from well OW-4 and submitted to the laboratory as sample number W-22. Chain-of-custody forms were completed in the field and accompanied the samples to the laboratory. Bailers were discarded after use.

#### 5.0 LABORATORY ANALYSIS

Groundwater samples were analyzed using EPA methods 8240 and 8270 for volatile and semi-volatile organic compounds, respectively. Laboratory reports and chain-of-custody forms are included in Appendix A.

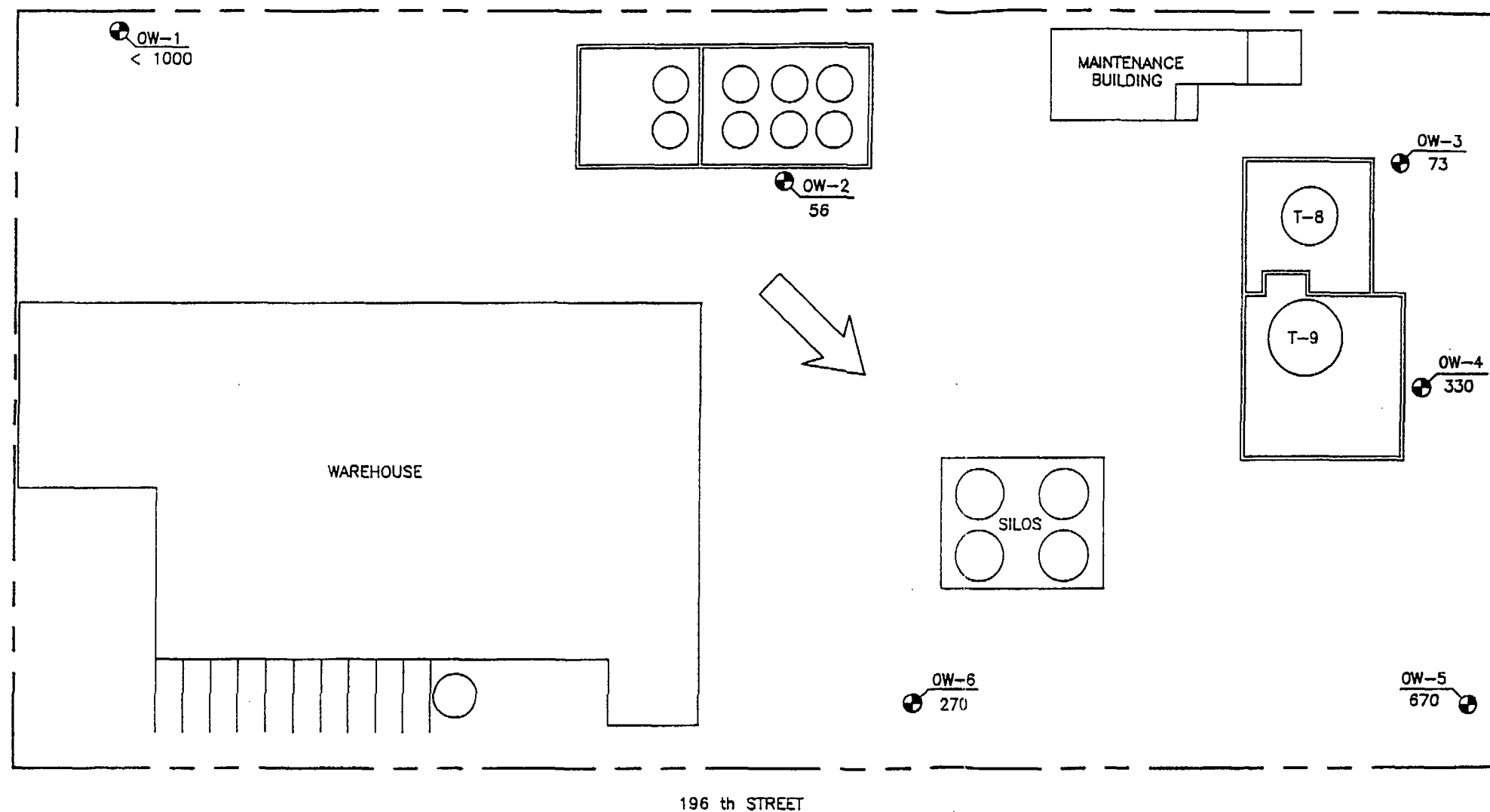
## 6.0 DISCUSSION OF RESULTS

Groundwater beneath the site occurs under water table conditions at an approximate depth of 75 feet below ground surface, or at an elevation of approximately 35 feet above mean sea level, with a gradient of 0.003 feet per foot to the southeast. Monitoring well hydrographs are included in Appendix B.

All groundwater samples contained detectable concentrations of volatile organic compounds. None of the groundwater samples contained detectable concentrations of semi-volatile organic compounds. The field blank sample contained a reported concentration of 72 micrograms per liter (ug/L) of Di-N-octyl phthalate, a plasticizer. This compound was not detected in any groundwater samples and may therefore, be attributed to either the polyethylene bailer or plastic bottle in which the distilled water was contained.

Maps showing detected concentrations of three organic compounds, 1,2 dichloroethene, trichloroethylene and tetrachloroethylene are presented in Figures 3-5, respectively. Table 1 contains reported concentrations of detected compounds by well number. Graphs of detected volatile compound concentrations over time are contained in Appendix C.

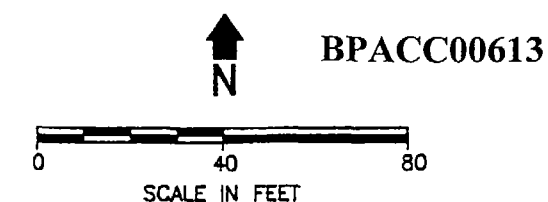
BPACC00612



OW-3 MONITORING WELL NUMBER  
73 1,2 DICHLOROETHENE CONCENTRATION  
(ug/L)

APPROXIMATE DIRECTION OF  
GROUNDWATER FLOW

NOTE: 1. Data collected December 6, 1990.



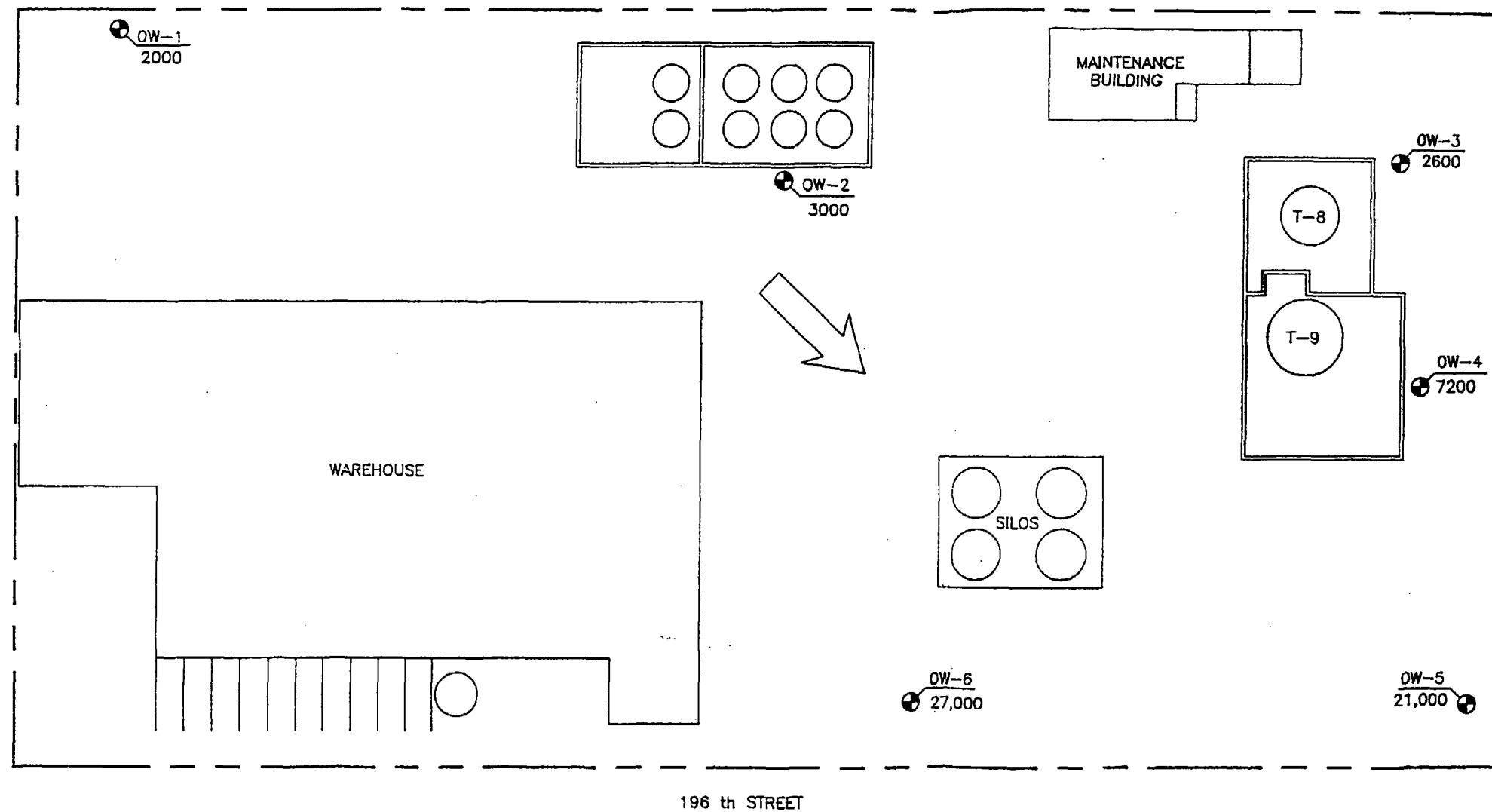
1,2 DICHLOROETHENE CONCENTRATION MAP  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:  
3



OW-3 MONITORING WELL NUMBER  
2600 TRICHLOROETHENE CONCENTRATION  
(ug/L)

APPROXIMATE DIRECTION OF  
GROUNDWATER FLOW

NOTE: 1. Data collected December 6, 1990.



BPACC00614

0 40 80  
SCALE IN FEET

TRICHLOROETHENE CONCENTRATION MAP  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

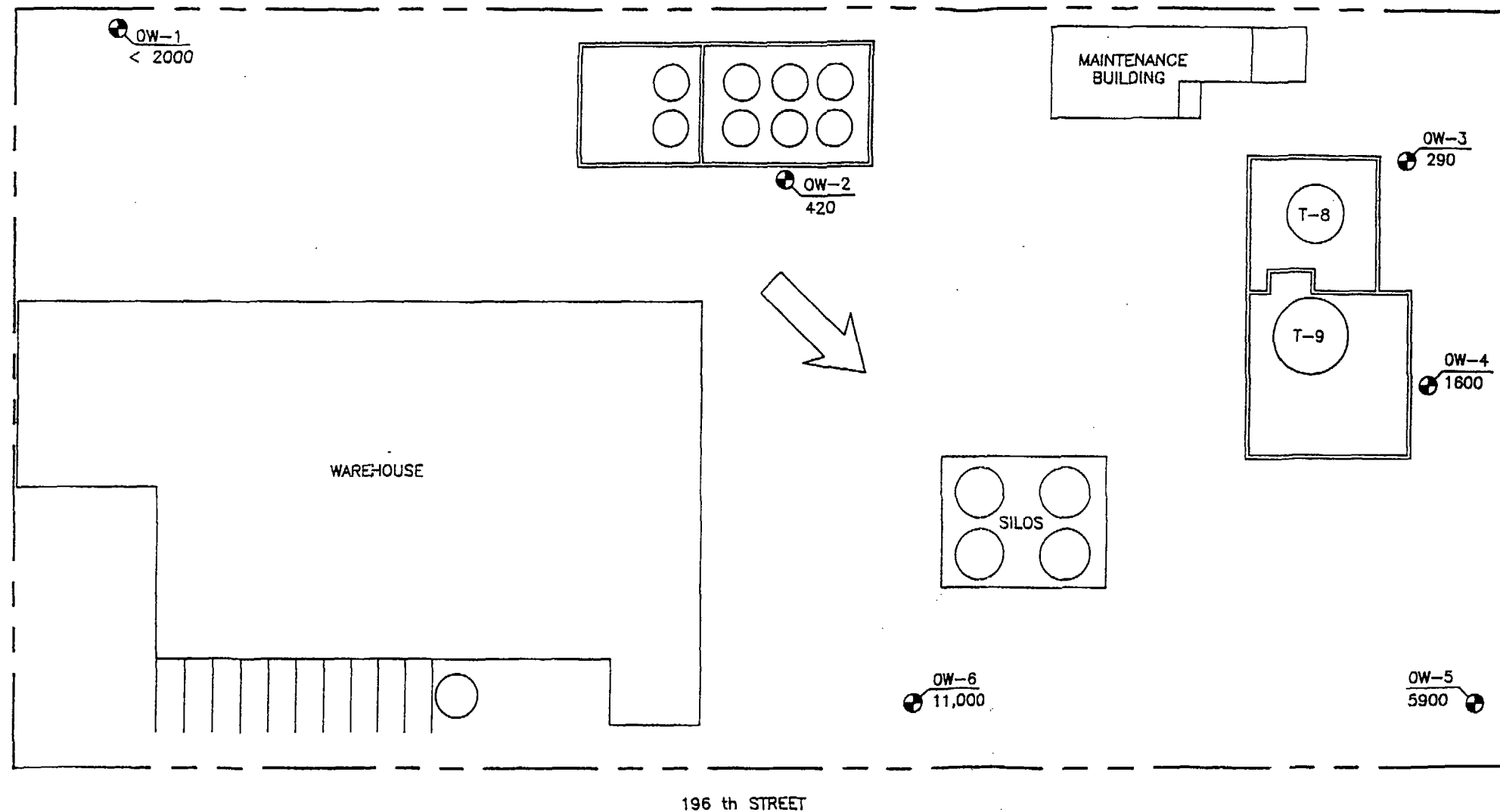
**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

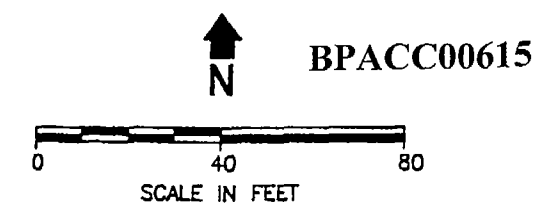
4



OW-3 MONITORING WELL NUMBER  
290 TETRACHLOROETHYLENE CONCENTRATION (ug/L)

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTE: 1. Data collected December 6, 1990.



TETRACHLOROETHYLENE CONCENTRATION MAP  
1225 WEST 196th STREET  
TORRANCE, CALIFORNIA

**Simon-EEL Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:  
5

TABLE 1

## REPORTED ANALYTICAL RESULTS OF SELECTED COMPOUNDS

	OW-00 (Field Blank)	OW-1	OW-2	OW-3	OW-4	OW-22 (a)	OW-5	OW-6
Methylene Chloride	<5(b)	320,000	<50	<100	<200	<125	<500	<500
1,1 Dichloroethene	<1	<1000	<10	<20	46	64	<100	<100
1,2 Dichloroethene	<1	<1000	56	73	330	330	670	270
Trichloroethylene	<1	2000	3000	2600	7200	7200	21000	27000
Tetrachloroethylene	<1	<2000	420	290	1600	1600	8100	11000
Chloroform	<1	<1000	25	<20	<40	<25	<100	<100
Semi-Volatile Organic Compounds	DI-N-Octyl-phthalate 72	Butanoic Acid 200 Carboxylic Acid 150	Cyclic Hydrocarbon 50	ND(c)	ND	ND	ND	ND

(a) Duplicate of OW-4

(b) &lt;5 = Not detected above 5 ug/L

(c) ND = None detected

BPACC00616

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results presented above, the following conclusions are made:

- o Groundwater at the site occurs under water table conditions at a depth of 63 to 66 feet below ground surface with a flow direction to the southeast having a gradient of approximately 0.003.
- o Groundwater at the site contains detectable concentrations of purgeable compounds specifically methylene chloride, 1,1- and 1,2-dichloroethene, TCE, PCE, and chloroform.
- o No semi volatile compounds were detected in collected groundwater samples above reported detection limits. Butanoic acid and carboxylic acid were detected in well OW-1. A cyclic hydrocarbon was detected in well OW-2.
- o Concentrations of the above chemicals appear to increase in a downgradient direction.

## 8.0 LIMITATIONS

The conclusions and recommendations presented above are based upon:

- o Observations and measurements collected during the sampling of six groundwater monitoring wells;
- o Results of laboratory analyses conducted on groundwater samples by Analytical Technologies, Inc. of San Diego, California;

It is possible that variations in groundwater conditions exist beyond the points explored in this assessment. Also, changes in groundwater conditions may occur at some future time due to fluctuations in rainfall, regional water uses, or other factors, which would alter chemical conditions presented above.

Simon-EEI Inc. warrants services provided in conjunction with this assessment were performed in a manner consistent with that level of care and skill ordinarily exercised by members of our profession currently practicing in the Los Angeles County area. No other warranty, express or implied, is made.



**APPENDIX A**  
**LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS**

**BPACC00619**



Analytical**Technologies**, Inc.

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 012070

January 3, 1991

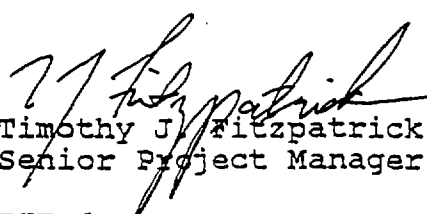
Simon-EEI, Inc.  
6695 E. Pacific Coast Highway  
Long Beach, CA 90803

Project No.: 512-345

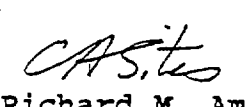
Attention: Bill Halbert

On December 6, 1990, Analytical Technologies, Inc. received eight water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

  
Timothy J. Fitzpatrick  
Senior Project Manager

TJF:da

  
Dr. Richard M. Amano  
Laboratory Manager

BPACC00620



Analytical Technologies, Inc.

ATI I.D. 012070

# ANALYTICAL SCHEDULE

CLIENT: SIMON-EEI, INC.  
PROJECT NAME: (NONE)

PROJECT NO.: 512-345

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

BPACC00621



CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)

DATE RECEIVED : 12/06/90

REPORT DATE : 01/03/91

ATI I.D. : 012070

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	W-00	WATER	12/05/90
02	W-01	WATER	12/05/90
03	W-02	WATER	12/05/90
04	W-03	WATER	12/05/90
05	W-04	WATER	12/05/90
06	W-05	WATER	12/05/90
07	W-06	WATER	12/05/90
08	W-22	WATER	12/05/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

BPACC00621A



ATI I.D. : 01207001

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-00  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/15/90  
UNITS : UG/L  
DILUTION FACTOR : 1

---

COMPOUNDS RESULTS

---

CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	110
BFB (%)	107
TOLUENE-D8 (%)	97

BPACC00621B



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207001

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

-----  
N/A

BPACC00621C



ATI I.D. : 01207002

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-01  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : 1000

COMPOUNDS	RESULTS
CHLOROMETHANE	<10000
BROMOMETHANE	<10000
VINYL CHLORIDE	<1000
CHLOROETHANE	<1000
METHYLENE CHLORIDE	320000
ACETONE	<20000
CARBON DISULFIDE	<1000
1,1-DICHLOROETHENE	<1000
1,1-DICHLOROETHANE	<1000
1,2-DICHLOROETHENE (TOTAL)	<1000
CHLOROFORM	<1000
1,2-DICHLOROETHANE	<1000
2-BUTANONE (MEK)	<20000
1,1,1-TRICHLOROETHANE	<1000
CARBON TETRACHLORIDE	<1000
VINYL ACETATE	<10000
BROMODICHLOROMETHANE	<1000
1,1,2,2-TETRACHLOROETHANE	<1000
1,2-DICHLOROPROPANE	<1000
CIS-1,3-DICHLOROPROPENE	<1000
TRICHLOROETHENE	2000
DIBROMOCHLOROMETHANE	<1000
1,1,2 TRICHLOROETHANE	<1000
BENZENE	<1000
TRANS-1,3-DICHLOROPROPENE	<1000
BROMOFORM	<5000
2-HEXANONE (MBK)	<10000
4-METHYL-2-PENTANONE (MIBK)	<10000
TETRACHLOROETHENE	<1000
TOLUENE	<2000
CHLOROBENZENE	<1000
ETHYL BENZENE	<1000
STYRENE	<1000
TOTAL XYLENES	<1000

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	110
BFB (%)	110
TOLUENE-D8 (%)	99

BPACC00621D



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207002

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

-----  
N/A

BPACC00621E





ATI I.D. : 01207003

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-02  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<100
BROMOMETHANE	<100
VINYL CHLORIDE	<10
CHLOROETHANE	<10
METHYLENE CHLORIDE	<50
ACETONE	<200
CARBON DISULFIDE	<10
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	56
CHLOROFORM	25
1,2-DICHLOROETHANE	<10
2-BUTANONE (MEK)	<200
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<100
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
CIS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	3000
DIBROMOCHLOROMETHANE	<10
1,1,2 TRICHLOROETHANE	<10
BENZENE	<10
TRANS-1,3-DICHLOROPROPENE	<10
BROMOFORM	<50
2-HEXANONE (MBK)	<100
4-METHYL-2-PENTANONE (MIBK)	<100
TETRACHLOROETHENE	420
TOLUENE	<20
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	117
BFB (%)	107
TOLUENE-D8 (%)	98

BPACC00621F



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207003

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

-----  
N/A

BPACC00621G

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-03  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<100
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<20
1,1-DICHLOROETHANE	<20
1,2-DICHLOROETHENE (TOTAL)	73
CHLOROFORM	<20
1,2-DICHLOROETHANE	<20
2-BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	<20
CARBON TETRACHLORIDE	<20
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	2600
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	<20
TRANS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<100
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	290
TOLUENE	<40
CHLOROBENZENE	<20
ETHYL BENZENE	<20
STYRENE	<20
TOTAL XYLENES	<20

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	110
BFB (%)	108
TOLUENE-D8 (%)	97



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207004

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

N/A

BPACC00621I



ATI I.D. : 01207005

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-04  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/17/90  
UNITS : UG/L  
DILUTION FACTOR : 40

COMPOUNDS	RESULTS
CHLOROMETHANE	<400
BROMOMETHANE	<400
VINYL CHLORIDE	<40
CHLOROETHANE	<40
METHYLENE CHLORIDE	<200
ACETONE	<800
CARBON DISULFIDE	<40
1,1-DICHLOROETHENE	46
1,1-DICHLOROETHANE	<40
1,2-DICHLOROETHENE (TOTAL)	330
CHLOROFORM	<40
1,2-DICHLOROETHANE	<40
2-BUTANONE (MEK)	<800
1,1,1-TRICHLOROETHANE	<40
CARBON TETRACHLORIDE	<40
VINYL ACETATE	<400
BROMODICHLOROMETHANE	<40
1,1,2,2-TETRACHLOROETHANE	<40
1,2-DICHLOROPROPANE	<40
CIS-1,3-DICHLOROPROPENE	<40
TRICHLOROETHENE	7200
DIBROMOCHLOROMETHANE	<40
1,1,2 TRICHLOROETHANE	<40
BENZENE	<40
TRANS-1,3-DICHLOROPROPENE	<40
BROMOFORM	<200
2-HEXANONE (MBK)	<400
4-METHYL-2-PENTANONE (MIBK)	<400
TETRACHLOROETHENE	1600
TOLUENE	<80
CHLOROBENZENE	<40
ETHYL BENZENE	<40
STYRENE	<40
TOTAL XYLENES	<40

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	104
BFB (%)	108
TOLUENE-D8 (%)	96

BPACC00621J



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207005

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS  
-----

NONE DETECTED

N/A

BPACC00621K



ATI I.D. : 01207006

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-05  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : 100

COMPOUNDS	RESULTS
CHLOROMETHANE	<1000
BROMOMETHANE	<1000
VINYL CHLORIDE	<100
CHLOROETHANE	<100
METHYLENE CHLORIDE	<500
ACETONE	<2000
CARBON DISULFIDE	<100
1,1-DICHLOROETHENE	<100
1,1-DICHLOROETHANE	<100
1,2-DICHLOROETHENE (TOTAL)	670
CHLOROFORM	<100
1,2-DICHLOROETHANE	<100
2-BUTANONE (MEK)	<2000
1,1,1-TRICHLOROETHANE	<100
CARBON TETRACHLORIDE	<100
VINYL ACETATE	<1000
BROMODICHLOROMETHANE	<100
1,1,2,2-TETRACHLOROETHANE	<100
1,2-DICHLOROPROPANE	<100
CIS-1,3-DICHLOROPROPENE	<100
TRICHLOROETHENE	21000
DIBROMOCHLOROMETHANE	<100
1,1,2 TRICHLOROETHANE	<100
BENZENE	<100
TRANS-1,3-DICHLOROPROPENE	<100
BROMOFORM	<500
2-HEXANONE (MBK)	<1000
4-METHYL-2-PENTANONE (MIBK)	<1000
TETRACHLOROETHENE	8100
TOLUENE	<200
CHLOROBENZENE	<100
ETHYL BENZENE	<100
STYRENE	<100
TOTAL XYLENES	<100

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	121
BFB (%)	109
TOLUENE-D8 (%)	95

BPACC00621L



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207006

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

N/A

BPACC00621M





ATI I.D. : 01207007

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-06  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : 100

COMPOUNDS	RESULTS
CHLOROMETHANE	<1000
BROMOMETHANE	<1000
VINYL CHLORIDE	<100
CHLOROETHANE	<100
METHYLENE CHLORIDE	<500
ACETONE	<2000
CARBON DISULFIDE	<100
1,1-DICHLOROETHENE	<100
1,1-DICHLOROETHANE	<100
1,2-DICHLOROETHENE (TOTAL)	270
CHLOROFORM	<100
1,2-DICHLOROETHANE	<100
2-BUTANONE (MEK)	<2000
1,1,1-TRICHLOROETHANE	<100
CARBON TETRACHLORIDE	<100
VINYL ACETATE	<1000
BROMODICHLOROMETHANE	<100
1,1,2,2-TETRACHLOROETHANE	<100
1,2-DICHLOROPROPANE	<100
CIS-1,3-DICHLOROPROPENE	<100
TRICHLOROETHENE	27000
DIBROMOCHLOROMETHANE	<100
1,1,2 TRICHLOROETHANE	<100
BENZENE	<100
TRANS-1,3-DICHLOROPROPENE	<100
BROMOFORM	<500
2-HEXANONE (MBK)	<1000
4-METHYL-2-PENTANONE (MIBK)	<1000
TETRACHLOROETHENE	11000
TOLUENE	<200
CHLOROBENZENE	<100
ETHYL BENZENE	<100
STYRENE	<100
TOTAL XYLENES	<100

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	117
BFB (%)	109
TOLUENE-D8 (%)	96

BPACC00621N



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207007

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

N/A

BPACC006210



ATI I.D. : 01207008

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-22  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/17/90  
UNITS : UG/L  
DILUTION FACTOR : 25

COMPOUNDS	RESULTS
CHLOROMETHANE	<250
BROMOMETHANE	<250
VINYL CHLORIDE	<25
CHLOROETHANE	<25
METHYLENE CHLORIDE	<125
ACETONE	<500
CARBON DISULFIDE	<25
1,1-DICHLOROETHENE	64
1,1-DICHLOROETHANE	<25
1,2-DICHLOROETHENE (TOTAL)	330
CHLOROFORM	<25
1,2-DICHLOROETHANE	<25
2-BUTANONE (MEK)	<500
1,1,1-TRICHLOROETHANE	<25
CARBON TETRACHLORIDE	<25
VINYL ACETATE	<250
BROMODICHLOROMETHANE	<25
1,1,2,2-TETRACHLOROETHANE	<25
1,2-DICHLOROPROPANE	<25
CIS-1,3-DICHLOROPROPENE	<25
TRICHLOROETHENE	7200
DIBROMOCHLOROMETHANE	<25
1,1,2 TRICHLOROETHANE	<25
BENZENE	<25
TRANS-1,3-DICHLOROPROPENE	<25
BROMOFORM	<125
2-HEXANONE (MBK)	<250
4-METHYL-2-PENTANONE (MIBK)	<250
TETRACHLOROETHENE	1600
TOLUENE	<50
CHLOROBENZENE	<25
ETHYL BENZENE	<25
STYRENE	<25
TOTAL XYLENES	<25

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	102
BFB (%)	108
TOLUENE-D8 (%)	97

BPACC00621P



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01207008

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

N/A

BPACC00621Q



Analytical Technologies, Inc.

## GCMS - RESULTS

## REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 012070  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/15/90  
UNITS : UG/L  
DILUTION FACTOR : N/A

---

COMPOUNDS RESULTS

---

CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	105
TOLUENE-D8 (%)	100

BPACC00621R



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.

ATI I.D. : 012070

UNITS : UG/L

-----  
COMPOUNDS

RESULTS  
-----

NONE DETECTED

N/A



## REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 012070  
DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
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CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	6
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

## SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	100
BFB (%)	105
TOLUENE-D8 (%)	99



Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.

ATI I.D. : 012070

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

BPACC00621U





Analytical Technologies, Inc.

## QUALITY CONTROL DATA

ATI I.D. : 012070

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
REF I.D. : 01207001

DATE EXTRACTED : N/A  
DATE ANALYZED : 12/16/90  
SAMPLE MATRIX : WATER  
UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP. SPIKED		RPD
	RESULT	SPIKED			SAMPLE	REC.	
1,1-DICHLOROETHENE	<1	41	34	83	38	93	11
TRICHLOROETHENE	<1	55	49	89	46	84	6
CHLOROBENZENE	<1	55	49	83	49	83	0
TOLUENE	<2	59	52	88	51	86	2
BENZENE	<1	59	50	85	48	81	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

BPACC00622

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-00  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/19/90  
UNITS : UG/L  
DILUTION FACTOR : 1

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COMPOUNDS	RESULTS
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N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

BPACC00623

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYL PHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	72
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	61
2-FLUOROBIPHENYL (%)	82
TERPHENYL (%)	89
PHENOL-D6 (%)	61
2-FLUOROPHENOL (%)	72
2,4,6-TRIBROMOPHENOL (%)	86



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207001

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

-----  
NONE DETECTED

-----  
N/A

BPACC00625



ATI I.D. : 01207002

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-01  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/19/90  
UNITS : UG/L  
DILUTION FACTOR : 1

## COMPOUNDS

## RESULTS

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS (2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS (2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS (2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

(CONTINUED NEXT PAGE)

BPACC00626



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYL PHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	10*
2-FLUOROBIPHENYL (%)	76
TERPHENYL (%)	63
PHENOL-D6 (%)	57
2-FLUOROPHENOL (%)	76
2,4,6-TRIBROMOPHENOL (%)	68

\* Result out of limits due to sample matrix interference



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207002

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

385 BUTANOIC ACID	200
392 CARBOXYLIC ACID	40
405 CARBOXYLIC ACID	50
423 CARBOXYLIC ACID	60

BPACC00628

ATI I.D. : 01207003

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-02  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/27/90  
UNITS : UG/L  
DILUTION FACTOR : 1

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COMPOUNDS RESULTS

---

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

(CONTINUED NEXT PAGE)

BPACC00629





TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYL PHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	80
2-FLUOROBIPHENYL (%)	85
TERPHENYL (%)	75
PHENOL-D6 (%)	12
2-FLUOROPHENOL (%)	16*
2,4,6-TRIBROMOPHENOL (%)	33

\* Result out of limits due to sample matrix interference



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207003

MATRIX : WATER

UNITS : UG/L

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COMPOUNDS

-----  
RESULTS  
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1278 CYCLIC HYDROCARBON

50

BPACC00631



ATI I.D. : 01207004

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-03  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/19/90  
UNITS : UG/L  
DILUTION FACTOR : 1

## COMPOUNDS

## RESULTS

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

(CONTINUED NEXT PAGE)

BPACC00632



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYL PHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b) FLUORANTHENE	<10
BENZO(k) FLUORANTHENE	<10
BENZO(a) PYRENE	<10
INDENO(1,2,3-cd) PYRENE	<10
DIBENZO(a,h) ANTHRACENE	<10
BENZO(g,h,i) PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	76
2-FLUOROBIPHENYL (%)	86
TERPHENYL (%)	73
PHENOL-D6 (%)	66
2-FLUOROPHENOL (%)	74
2,4,6-TRIBROMOPHENOL (%)	71



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207004

MATRIX : WATER

UNITS : UG/L

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COMPOUNDS

-----  
RESULTS  
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NONE DETECTED

N/A

BPACC00634



ATI I.D. : 01207005

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-04  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/19/90  
UNITS : UG/L  
DILUTION FACTOR : 1

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COMPOUNDS RESULTS

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N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

BPACC00635

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b) FLUORANTHENE	<10
BENZO(k) FLUORANTHENE	<10
BENZO(a) PYRENE	<10
INDENO(1,2,3-cd) PYRENE	<10
DIBENZO(a,h) ANTHRACENE	<10
BENZO(g,h,i) PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	64
2-FLUOROBIPHENYL (%)	75
TERPHENYL (%)	73
PHENOL-D6 (%)	32
2-FLUOROPHENOL (%)	45
2,4,6-TRIBROMOPHENOL (%)	50



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207005

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

N/A

BPACC00637





ATI I.D. : 01207006

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-05  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/27/90  
UNITS : UG/L  
DILUTION FACTOR : 1

## COMPOUNDS

## RESULTS

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS (2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS (2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS (2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

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BPACC00638



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	74
2-FLUOROBIPHENYL (%)	66
TERPHENYL (%)	53
PHENOL-D6 (%)	40
2-FLUOROPHENOL (%)	54
2,4,6-TRIBROMOPHENOL (%)	41



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207006

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

-----  
N/A

BPACC00640



ATT I.D. : 01207007

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-06  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/27/90  
UNITS : UG/L  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
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N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

BPACC00641

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	74
2-FLUOROBIPHENYL (%)	69
TERPHENYL (%)	54
PHENOL-D6 (%)	39
2-FLUOROPHENOL (%)	53
2,4,6-TRIBROMOPHENOL (%)	64



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207007

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS  
-----

NONE DETECTED

N/A

BPACC00643



ATI I.D. : 01207008

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : W-22  
SAMPLE MATRIX : WATER

DATE SAMPLED : 12/05/90  
DATE RECEIVED : 12/06/90  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/27/90  
UNITS : UG/L  
DILUTION FACTOR : 1

---

COMPOUNDS RESULTS

---

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS (2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS (2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS (2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

BPACC00644

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYL PHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	81
2-FLUOROBIPHENYL (%)	70
TERPHENYL (%)	61
PHENOL-D6 (%)	70
2-FLUOROPHENOL (%)	80
2,4,6-TRIBROMOPHENOL (%)	64





Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 01207008

MATRIX : WATER

UNITS : UG/L

-----  
COMPOUNDS

-----  
RESULTS

NONE DETECTED

-----  
N/A

BPACC00646



## REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.  
PROJECT # : 512-345  
PROJECT NAME : (NONE)  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 012070  
DATE EXTRACTED : 12/10/90  
DATE ANALYZED : 12/26/90  
UNITS : UG/L  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
-----------	---------

N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10
4-CHLOROPHENYL PHENYL ETHER	<10

(CONTINUED NEXT PAGE)

BPACC00647

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a) ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b) FLUORANTHENE	<10
BENZO(k) FLUORANTHENE	<10
BENZO(a) PYRENE	<10
INDENO(1,2,3-cd) PYRENE	<10
DIBENZO(a,h) ANTHRACENE	<10
BENZO(g,h,i) PERYLENE	<10

## SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	80
2-FLUOROBIPHENYL (%)	79
TERPHENYL (%)	95
PHENOL-D6 (%)	63
2-FLUOROPHENOL (%)	67
2,4,6-TRIBROMOPHENOL (%)	75



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.

ATI I.D. : 012070

UNITS : UG/L

-----  
COMPOUNDS

RESULTS  
-----

3-METHYLPHENOL

<10



Analytical Technologies, Inc.

## QUALITY CONTROL DATA

ATI I.D. : 012070

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : SIMON-EEI INC.

DATE EXTRACTED : 12/10/90

PROJECT # : 512-345

DATE ANALYZED : 12/26/90

PROJECT NAME : (NONE)

SAMPLE MATRIX : WATER

REF I.D. : REAGENT WATER

UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED RESULT	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED				SPIKED SAMPLE	% REC.	
1,2,4-TRICHLOROBENZENE	<10	100	59	59	71	71		18
ACENAPHTHENE	<10	100	58	58	67	67		14
2,4-DINITROTOLUENE	<10	100	72	72	81	81		12
PYRENE	<10	100	84	84	97	97		14
N-NITROSO-DI-N-PROPYLAMINE	<10	100	45	45	53	53		16
1,4-DICHLOROBENZENE	<10	100	63	63	69	69		9
PENTACHLOROPHENOL	<50	400	324	81	339	85		5
PHENOL	<10	200	122	61	119	60		2
2-CHLOROPHENOL	<10	200	137	68	134	67		2
4-CHLORO-3-METHYLPHENOL	<10	200	152	76	162	81		6
4-NITROPHENOL	<50	400	362	90	350	87		3

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

BPACC00650

012070

CHAIN OF CUSTODY RECORD

LABORATORY: <b>ATI</b>	PROJECT NO. <b>512-345</b>	PURCHASE ORDER NO.
<b>5550 MOREHOUSE DR.</b>	SAMPLERS:(signature) <b>L Chmoe</b>	
<b>SAN DIEGO, CA. 92121</b>	Phone No. <b>213/430-6500</b>	

			ANALYSES REQUESTED												Number of Containers	REMARKS
SAMPLE NO.	DATE	TIME														
			624	625												
W-00-01	12/5/90	AM	X												2	624 bottles inclu
W-00-02				X											2	a duplicate -
W-01-01			X												2	
W-01-02				X											2	
W-02-01			X												2	Proj. Manager:
W-02-02				X											2	Bill Halbert -
W-03-01		PM	X												2	
W-03-02				X											2	
W-04-01			X												2	
W-04-02			X												2	
W-05-01			X												2	
W-05-02				X											2	
W-06-01			X												2	
W-06-02				X											2	BPACC00651

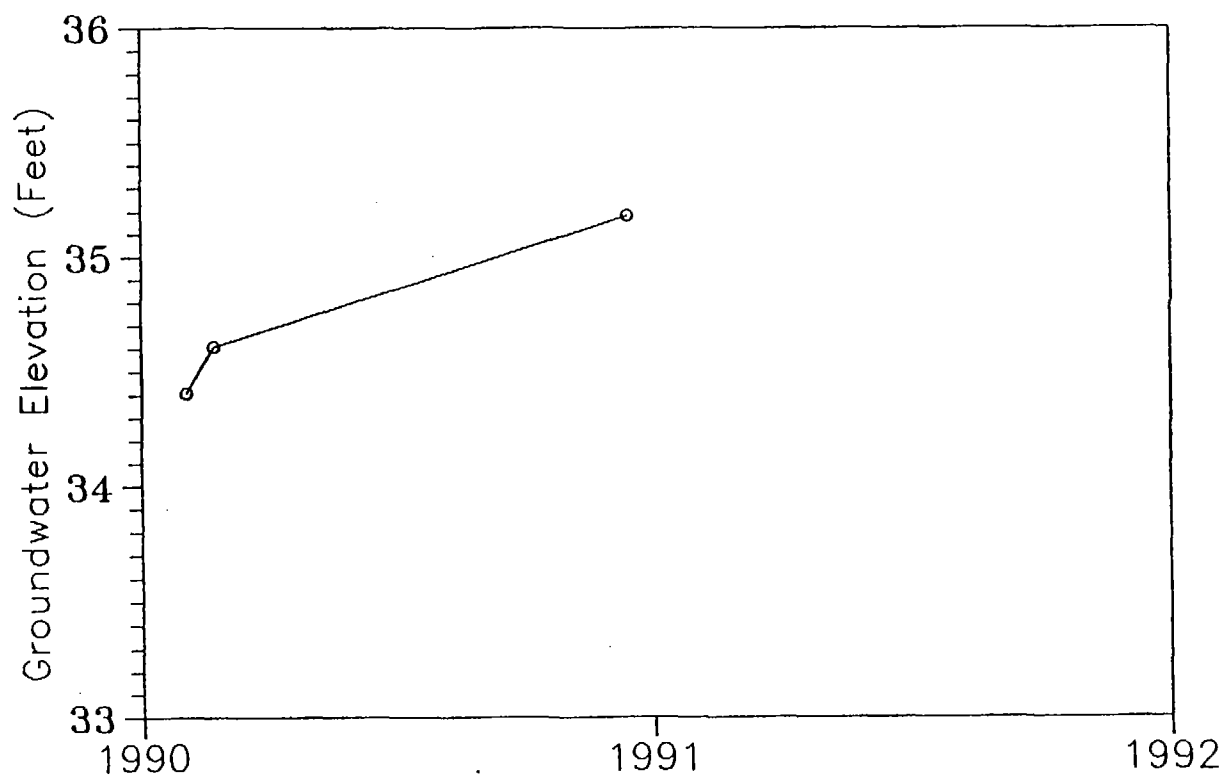
PINK COPY: SAMPLER RETAINS			YELLOW COPY: LABORATORY COPY		
WHITE COPY: LABORATORY SIGNS AND RETURNS WITH ANALYTICAL RESULTS					
TOTAL NUMBER OF CONTAINERS					<b>28</b>
Relinquished by:(signature) <b>Leobardo Chaidz</b>		Received by:(signature) <b>Rafael J. Carlson</b>		Date/Time <b>2/6/105</b>	
Relinquished by:(signature) <b>Rafael J. Carlson</b>		Received by:(signature) <b>Dale G. Geller</b>		Date/Time <b>12/6/90 8:00</b>	
Relinquished by:(signature) <b>Dale G. Geller</b>		Received by:(signature)		Date/Time	
Relinquished by:(signature)		Received for laboratory by:(signature)		Date/Time	



**APPENDIX B**  
**MONITORING WELL HYDROGRAPHS**

**BPACC00653**

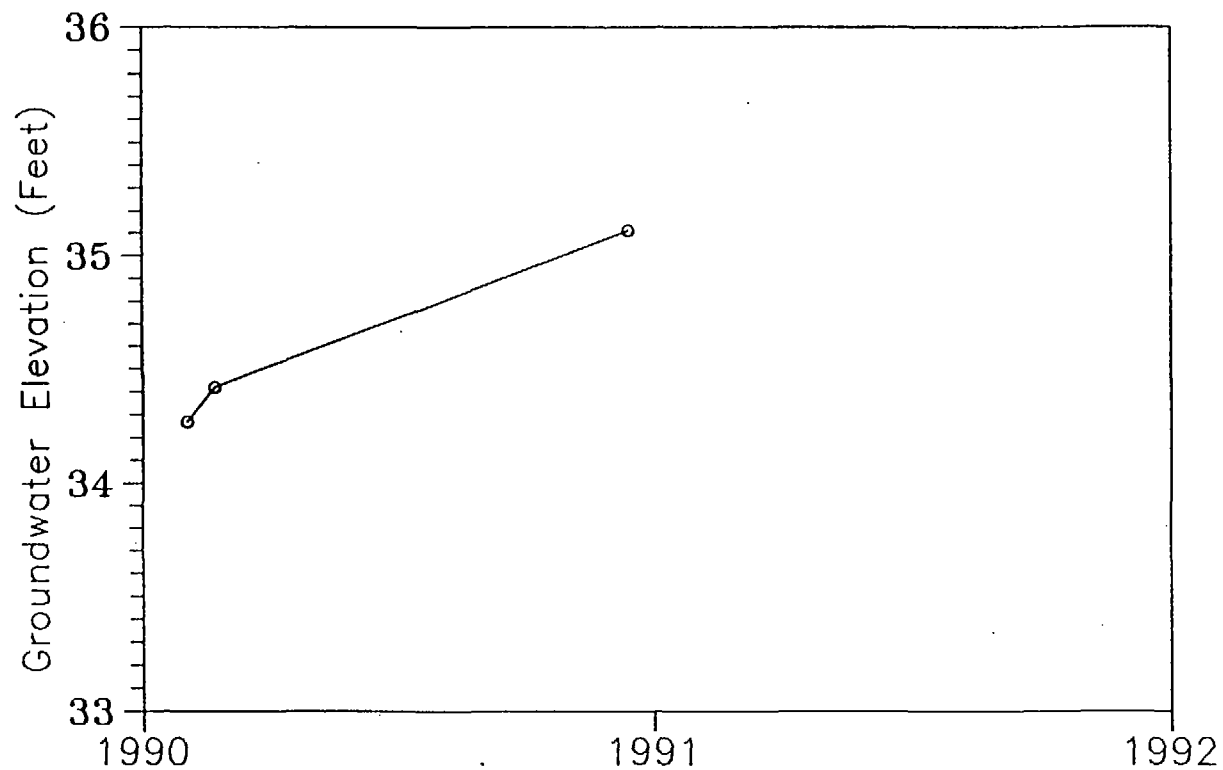




BPACC00654

MONITORING WELL HYDROGRAPH  
WELL # 1  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

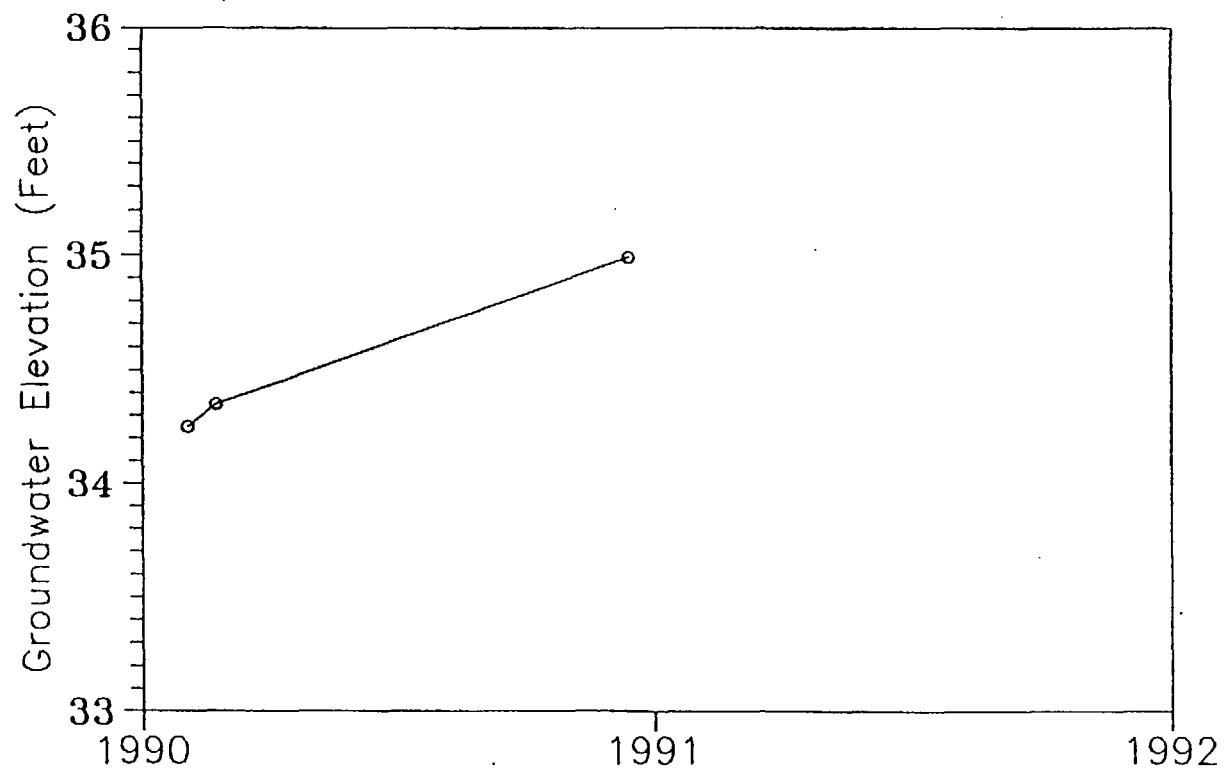
<b>simon-EEI Inc.</b>	
PROJECT NO: 512-345	FIGURE:
DATE: DECEMBER, 1990	B-1



BPACC00655

MONITORING WELL HYDROGRAPH  
WELL # 2  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

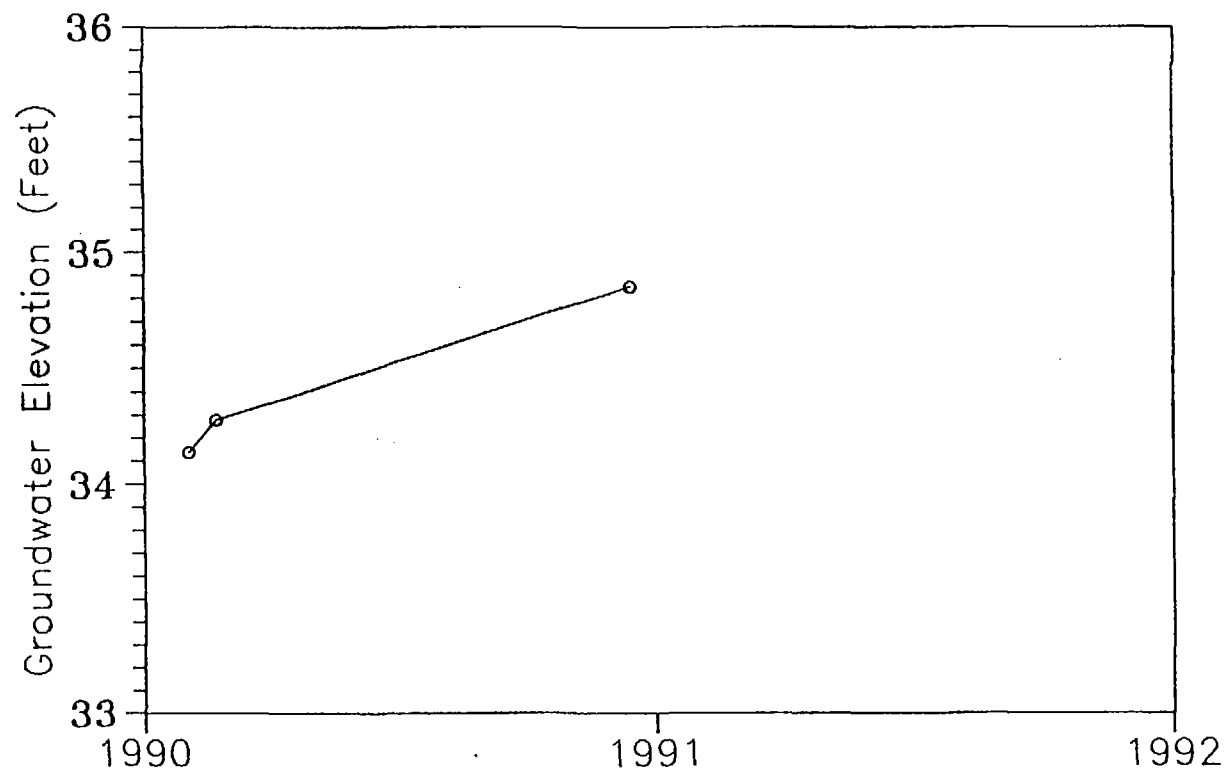
**SIMON-EEI Inc.**  
PROJECT NO: 512-345  
DATE: DECEMBER, 1990  
FIGURE: B-2



BPACC00656

MONITORING WELL HYDROGRAPH  
WELL # 3  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

<b>simon-EEI Inc.</b>	
PROJECT NO: 512-345	FIGURE: B-3
DATE: DECEMBER, 1990	



BPACC00657

MONITORING WELL HYDROGRAPH

WELL # 4

1225 WEST 196 TH STREET

TORRANCE, CALIFORNIA

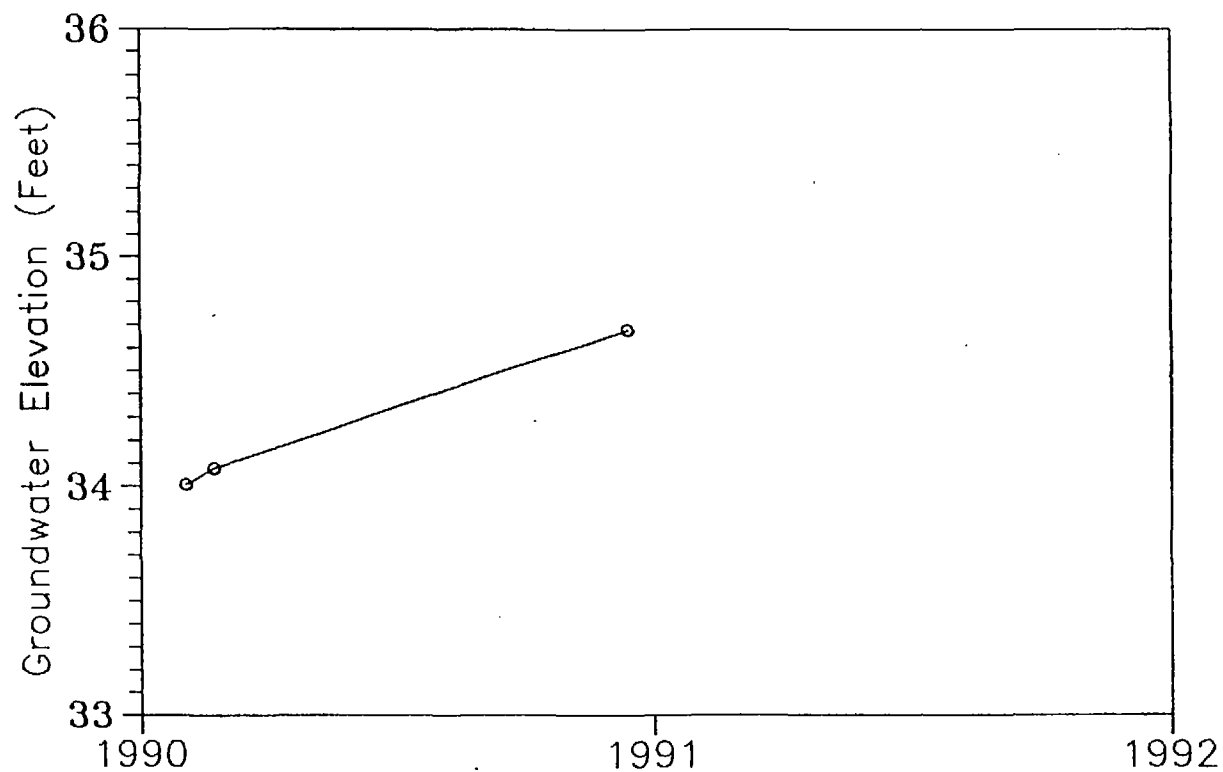
**simon-EEI Inc.**

PROJECT NO: 512-345

FIGURE:

DATE: DECEMBER, 1990

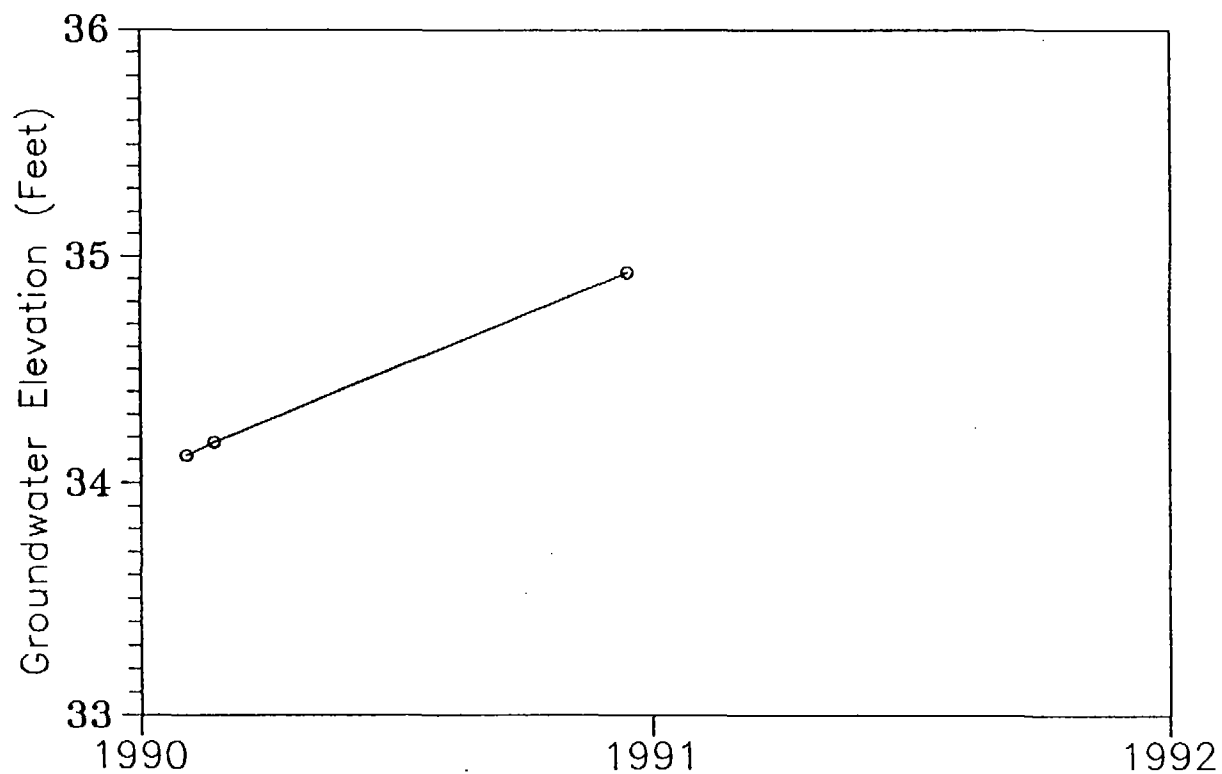
B-4



BPACC00658

MONITORING WELL HYDROGRAPH  
WELL # 5  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

<b>SIMON-EEI Inc.</b>	
PROJECT NO: 512-345	FIGURE: B-5
DATE: DECEMBER, 1990	



BPACC00659

MONITORING WELL HYDROGRAPH

WELL # 6

1225 WEST 196 TH STREET

TORRANCE, CALIFORNIA

**simon-EEI Inc.**

PROJECT NO: 512-345

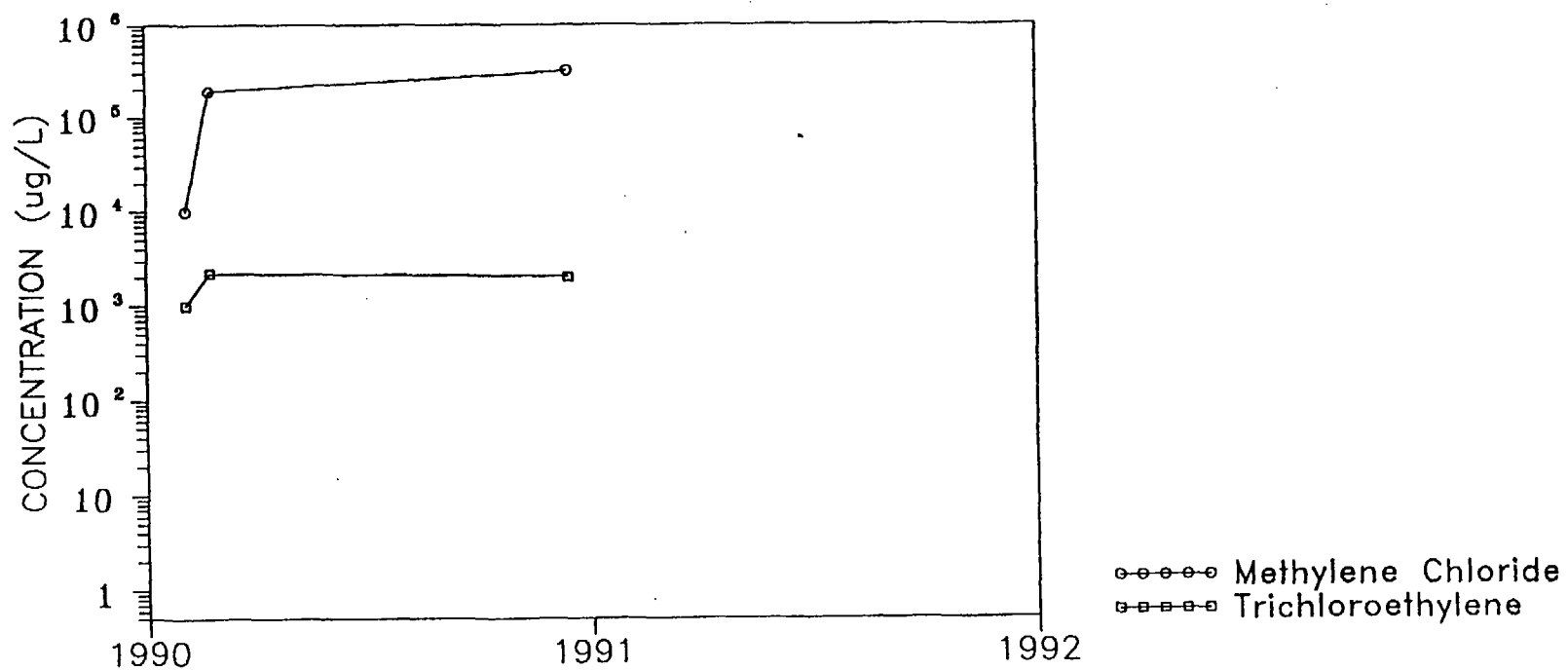
DATE: DECEMBER, 1990

FIGURE:

B-6

APPENDIX C  
GRAPHS OF SELECTED ORGANIC COMPOUNDS  
OVER TIME

BPACC00660



BPACC00661

SELECTED ORGANIC COMPOUNDS VERSUS TIME

WELL #. 1

1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

**simon-EEI Inc.**

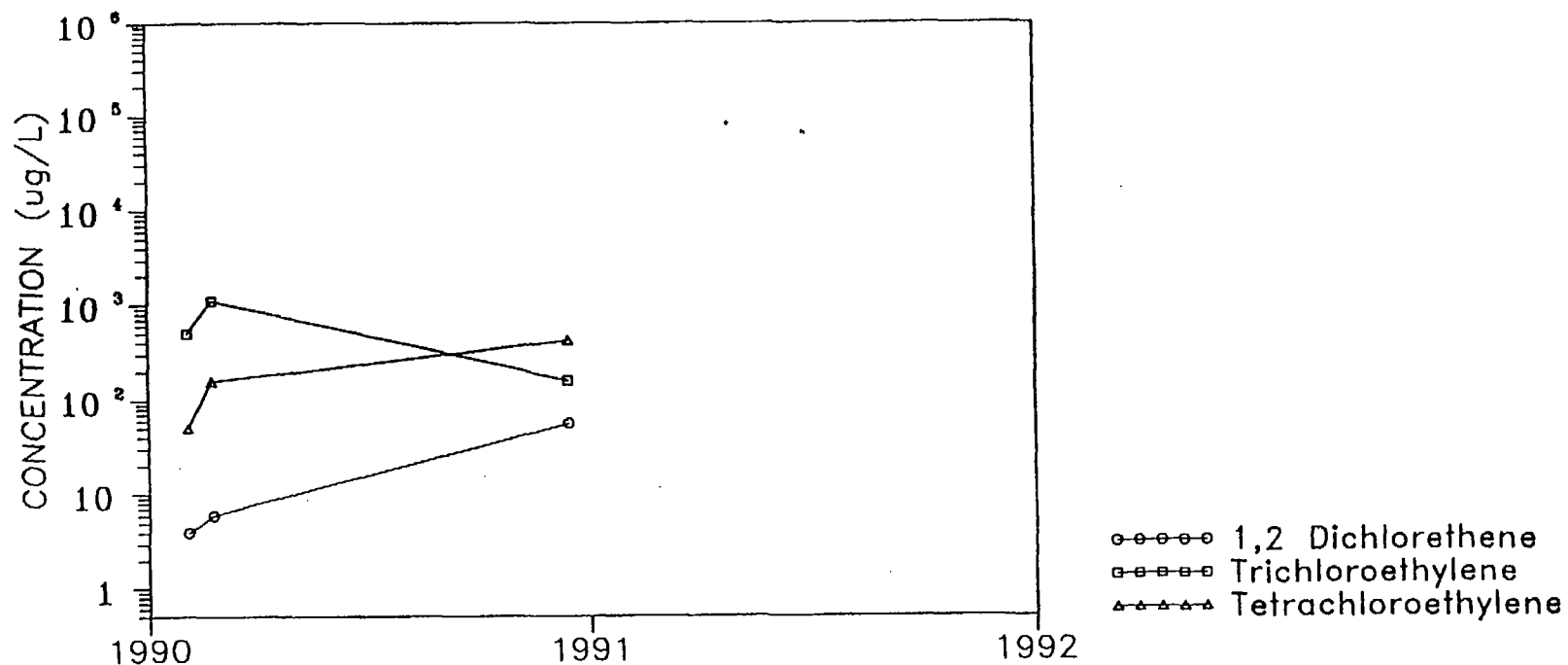
PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

C-1





BPACC00662

SELECTED ORGANIC COMPOUNDS VERSUS TIME

WELL #. 2

1225 WEST 196 TH STREET

TORRANCE, CALIFORNIA

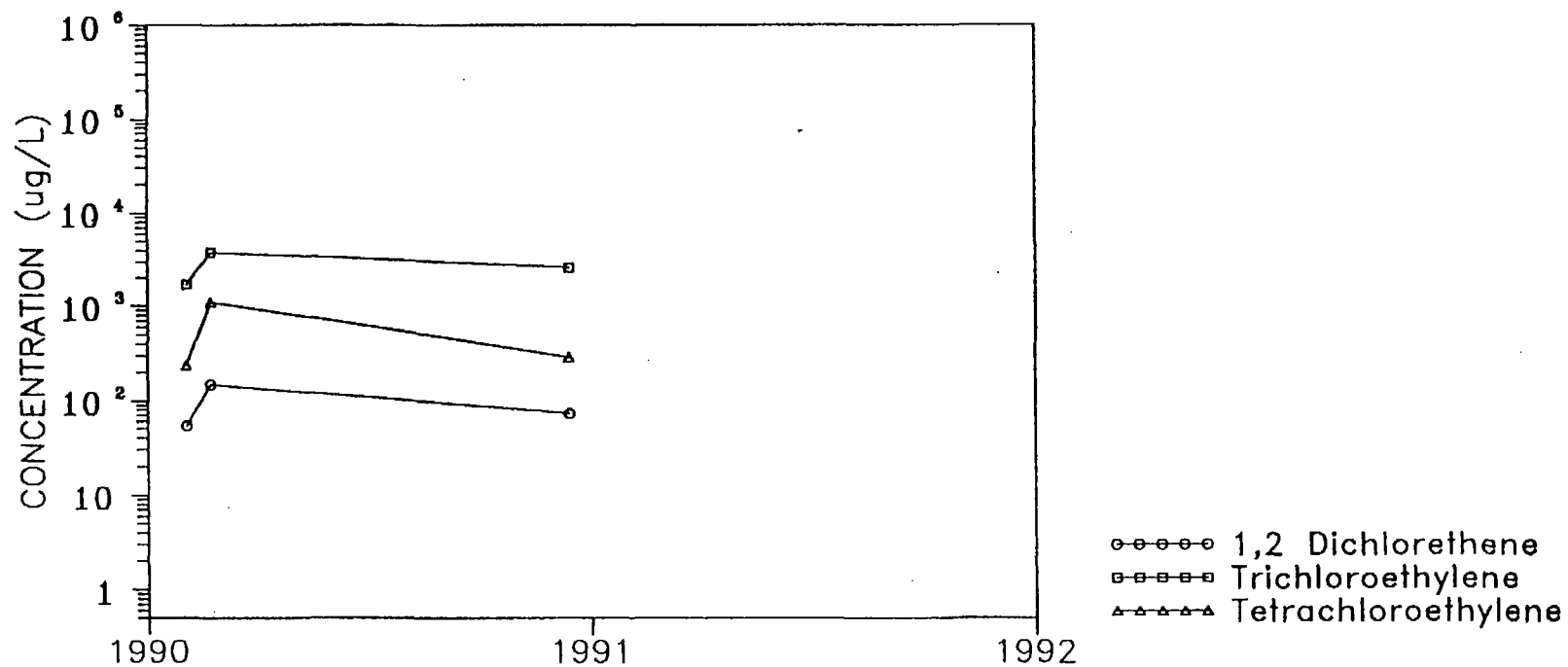
**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

C-2



BPACC00663

SELECTED ORGANIC COMPOUNDS VERSUS TIME

WELL # 3

1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

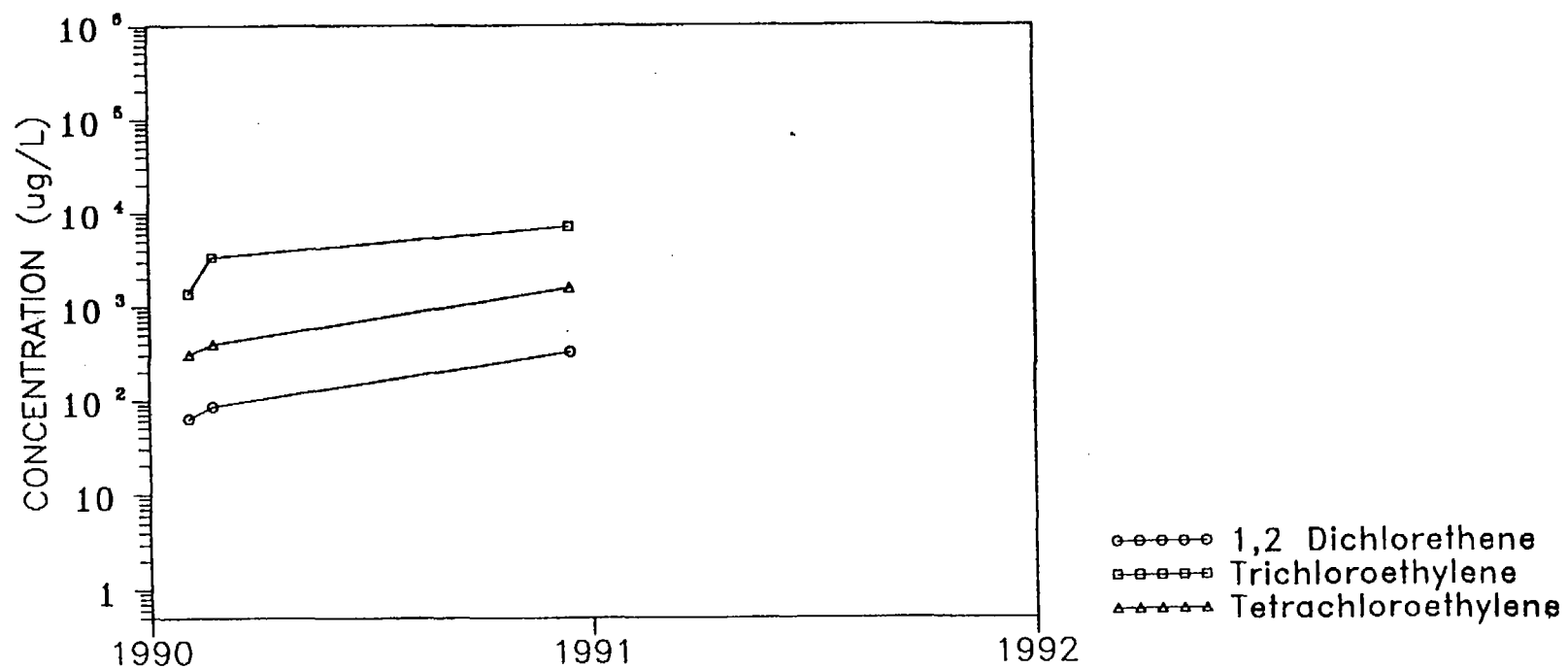
**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

C-3



BPACC00664

SELECTED ORGANIC COMPOUNDS VERSUS TIME  
WELL #. 4  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

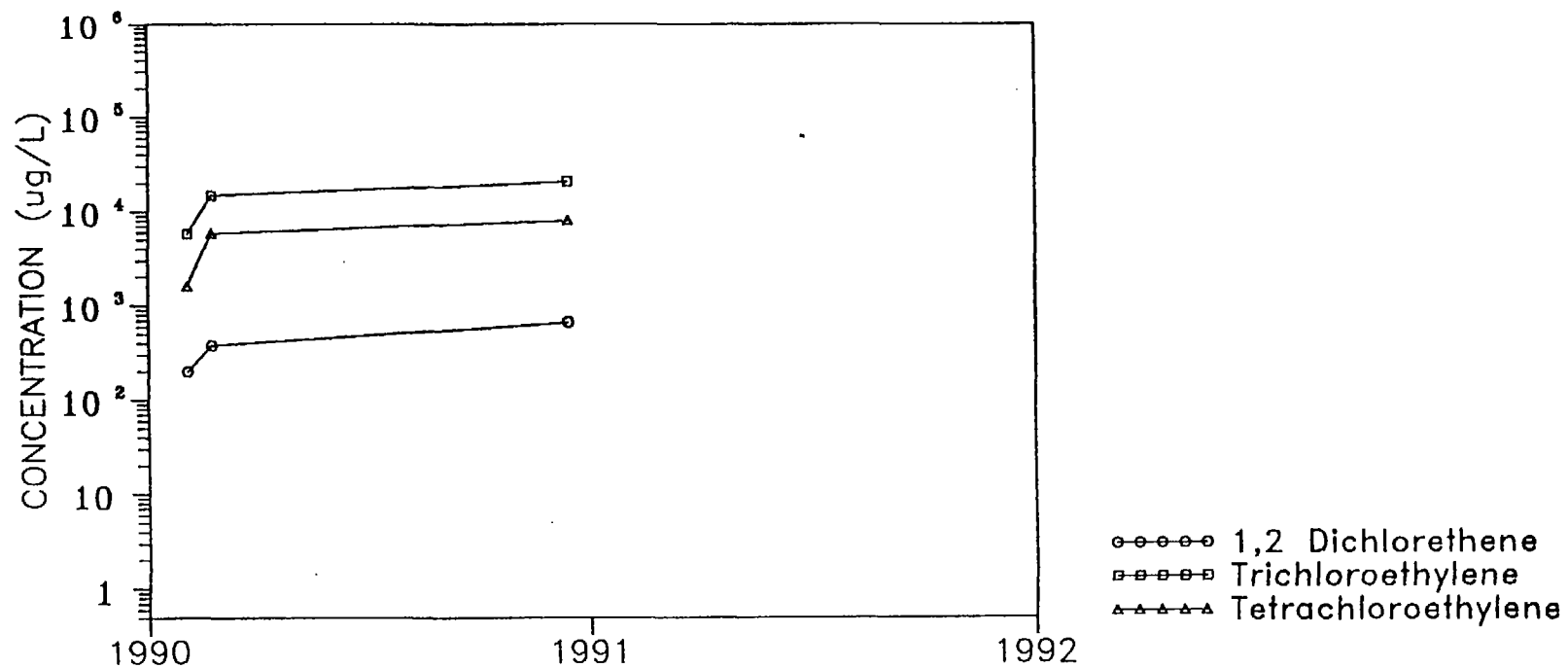
**SIMON-EEI Inc.**

PROJECT NO: 512-345

FIGURE:

DATE: DECEMBER, 1990

C-4



BPACC00665

SELECTED ORGANIC COMPOUNDS VERSUS TIME  
WELL #. 5  
1225 WEST 196 TH STREET  
TORRANCE, CALIFORNIA

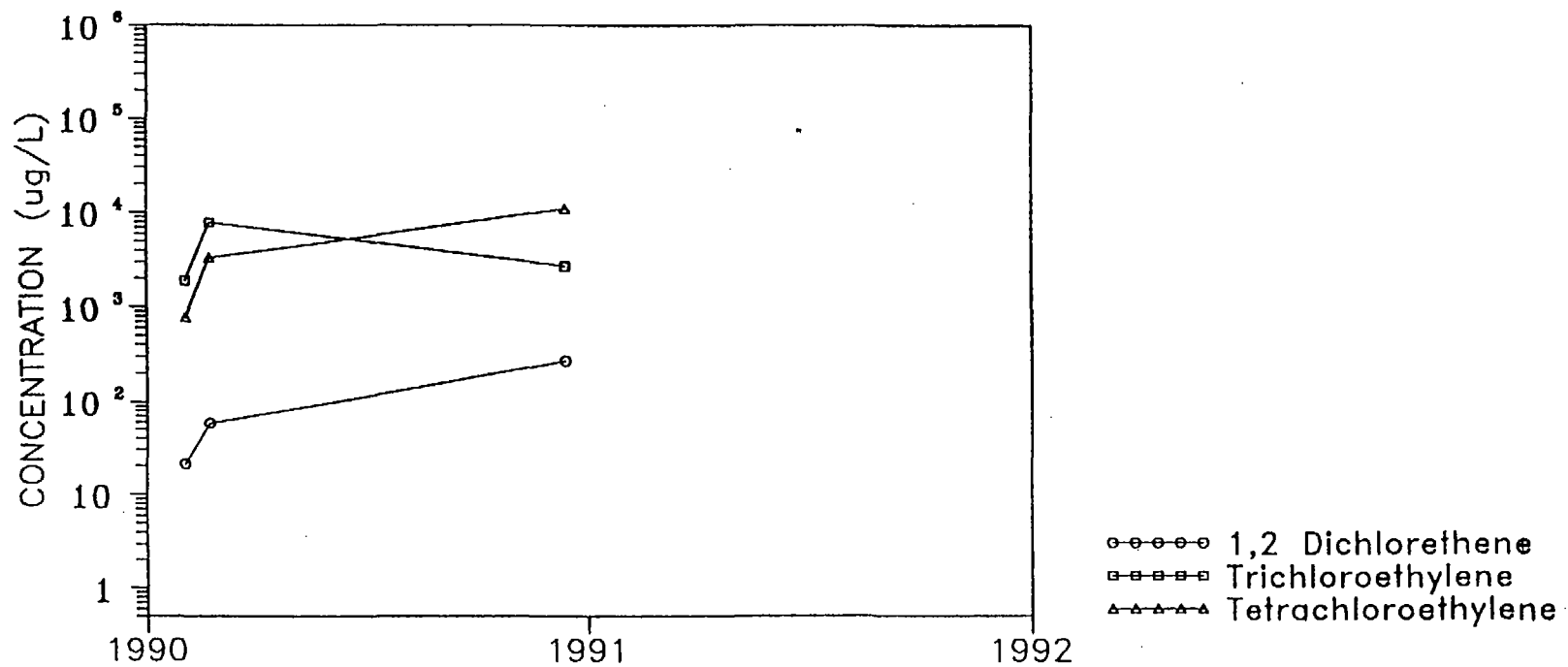
**simon-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

C-5



BPACC00666

SELECTED ORGANIC COMPOUNDS VERSUS TIME

WELL #. 6

1225 WEST 196 TH STREET

TORRANCE, CALIFORNIA

**SIMON-EEI Inc.**

PROJECT NO: 512-345

DATE: DECEMBER, 1990

FIGURE:

C-6

**JANUARY, 1992  
GROUNDWATER SAMPLING  
AND ANALYSIS REPORT  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA**

March 11, 1992

Simon Hydro-Search  
5882 Bolsa Avenue  
Huntington Beach, California 92649

Project No. 512-345

**BPACC00667**

JANUARY, 1992  
GROUNDWATER SAMPLING AND ANALYSIS REPORT  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

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2	Groundwater Elevation Contour Map
3	Cis-1,2 Dichloroethene Concentration Map
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B	Groundwater Monitoring Well Sampling Protocol

**JANUARY, 1992**  
**GROUNDWATER SAMPLING AND ANALYSIS REPORT**  
**AMOCO CHEMICAL COMPANY**  
**TORRANCE, CALIFORNIA**

## **1.0 INTRODUCTION**

Amoco Chemical Company operates a facility at 1225 West 196th Street, Torrance, California for the conversion of styrene monomer to styrene polymer (Figure 1). The purpose of the groundwater sampling was to evaluate the concentration of volatile and semi-volatile organic compounds in water samples collected from six on site monitoring wells. This report contains the results of the January 16, 1992 sampling event performed by Simon Hydro-Search (Simon).

## **2.0 WORK COMPLETED**

Groundwater samples from six onsite monitoring wells were collected and chemically analyzed by EPA Methods 624 and 625 for volatile and semi-volatile compounds, respectively.

The groundwater sampling methods used are discussed in Appendix B.

## **3.0 SITE HYDROGEOLOGY**

Groundwater occurs under water table conditions at depths of 63 to 66 feet below ground surface (Table 2). Groundwater flow direction is towards the south with a gradient of approximately 0.0016 ft./ft. as shown on the water table elevation contour map (Figure 2).

## **4.0 GROUNDWATER LABORATORY ANALYTICAL RESULTS**

Six groundwater samples plus a field blank (OW-00) and a duplicate of well OW-2 (OW-100) were analyzed by a State certified laboratory using EPA Methods 624 and 625 for volatile and semi-volatile compounds, respectively. Laboratory reports and chain-of-custody forms are included in Appendix A.

The groundwater from each of the six wells had detectable concentrations of volatile (halogenated and aromatic) organic compounds (Table 1). 1,2-dichlorobenzene was the only semi-volatile compound reported. It had a concentration of 5 ug/l in monitoring well OW-6.



Eleven halogenated compounds were detected in the groundwater samples. Five of these compounds (1,1-DCA, 1,1-DCE, cis-1,2-DCE, TCE, and PCE)<sup>1</sup>, had concentrations that were greater than their respective CADHS MCLs<sup>2</sup>.

Three of the eleven detected halogenated compounds (trans-1,2-DCE, 1,1,2 TCA, and trichlorofluoromethane) were detected at concentrations less than their respective CADHS MCLs.

The three remaining detected halogenated compounds are 1,2-dichlorobenzene, chloroform, and methylene chloride. The detected 1,2-dichlorobenzene concentration was less than the CADHS AL (there is no MCL set for this compound). There is no established CADHS MCL or AL for chloroform. The detected methylene chloride concentration was greater than the CADHS AL (there is no MCL set for this compound).

Four aromatic compounds, (benzene, ethylbenzene, toluene, and xylenes) were detected in the groundwater samples. The benzene concentration was greater than its MCL but the remaining three were detected at concentrations less than their applicable MCL or AL.

Groundwater concentration maps of cis-1,2-DCE, TCE, PCE, methylene chloride, and benzene are enclosed as figures 3 through 7.

1,1-DCA: 1,1-dichloroethane; 1,1-DCE: 1,1-dichloroethene; cis-1,2-DCE: cis-1,2-dichloroethene; trans-1,2-DCE: trans-1,2-dichloroethene; PCE: tetrachloroethene; 1,1,2-TCA: 1,1,2-trichloroethane, TCE: trichloroethene

Maximum Contaminant Levels (MCLs) and Action Levels (ALs) for drinking water in California are established by the California Department of Health Services (CADHS). "MCLs are enforceable primary drinking water standards, adopted into regulation under the Safe Drinking Water Act, which must be met by all public drinking water systems to which they apply. They are risk-management numbers based on comprehensive risk assessments, exposure levels, analytical detection limits, feasibility of removal and removal costs. In cases where no MCL has been established, ALs serve as non-enforceable health-based guidance numbers, which are only affected by analytical detection limits. They are provided by the Department as interim guidance for "safe" levels of contaminants in drinking water". Alexis M. Miller, P.E., Standards and Technology Unit, Office of Drinking Water, California Department of Health Services, October 24, 1990.

# GROUNDWATER LABORATORY ANALYTICAL RESULTS

TABLE 1

Report: JANUARY, 1992 BIENNIAL GROUNDWATER MONITORING REPORT  
 Client: AMOCO  
 Facility: AMOCO Chemical Company  
 Location: 1225 West 196th Street/Normandie  
 City: Torrance, California

SIMON Hydro-Search  
 Project: 512-345  
 Contract: NA  
 Date: 11-Mar-92

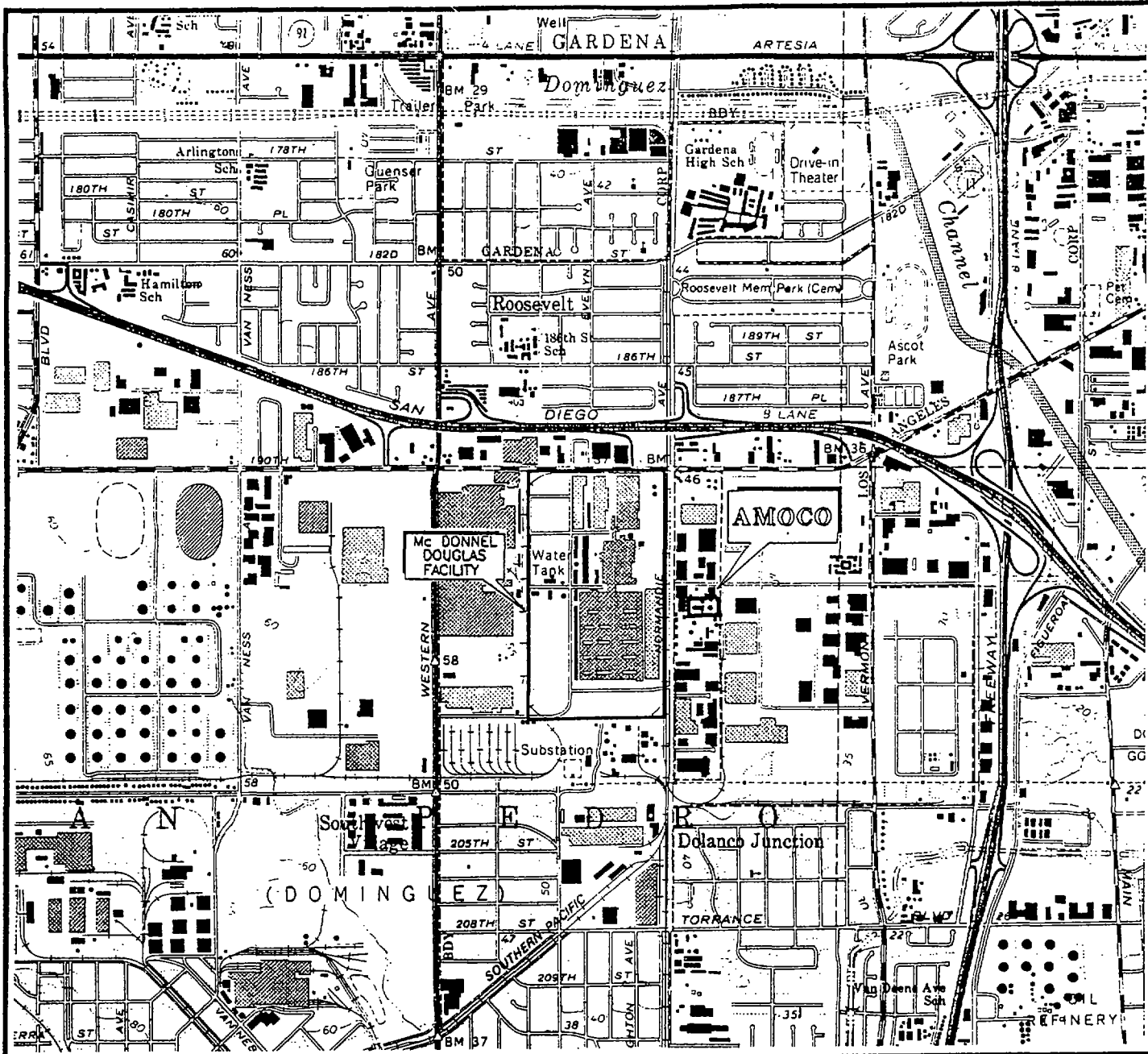
SAMPLE DESCRIPTION		LABORATORY RESULTS															
		ND = Not Detected above limit shown, NA = Not Analyzed, Unregulated = Monitoring Required per CADHS, Not Listed = No CADHS Levels Established															
Sample	Well/Sample	Benzene	Chloroform	1,2-Dichloro benzene	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2-Dichloro ethene	trans-1,2-Dichloro ethene	Ethyl benzene	Methylene Chloride	Tetrachloro ethene	Toluene	1,1,2-Trichloro ethane	Trichloro ethene	Trichloro fluoro methane	Xylenes Total	All Other Semi-Volatile Compounds
Date	Name	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 825 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 824 (ug/l)	EPA 825 (ug/l)
CADHS MCL as of 18 OCT 90		1	unregulated	unregulated	5	6	8	10	880	unregulated	5	unregulated	32	5	150	1,750	
CADHS AL as of 18 OCT 90			not listed	130						40		100					
01/16/92	OW-00 field blank	ND <3	ND <3	ND <5	ND <3	ND <3	ND <3	ND <3	ND <3	ND <5	ND <3	ND <3	ND <5	ND <3	ND <10	ND <3	none detected
01/16/92	OW-01	3	37	ND <5	ND <3	8	60	ND <3	5	1,000,000	190	4	6	2,200	ND <10	14	none detected
01/16/92	OW-02	ND <3	11	ND <5	ND <3	ND <3	23	7	ND <3	830	480	ND <3	ND <5	2,700	17	ND <3	none detected
01/16/92	OW-02 Duplicate	ND <3	13	ND <5	ND <3	ND <3	24	8	ND <3	25	390	ND <3	ND <5	2,700	18	ND <3	none detected
01/16/92	OW-03	ND <3	8	ND <5	ND <3	8	59	ND <3	ND <3	7	430	ND <3	ND <5	3,200	ND <10	ND <3	none detected
01/16/92	OW-04	7	19	ND <5	ND <3	33	190	ND <3	ND <3	5	1,300	ND <3	ND <5	5,500	ND <10	ND <3	none detected
01/16/92	OW-05	22	34	ND <5	10	150	590	ND <3	ND <3	8	5,500	ND <3	ND <5	14,000	14	ND <3	none detected
01/16/92	OW-06	28	69	5	11	130	300	ND <3	ND <3	ND <5	8,400	ND <3	ND <5	21,000	ND <10	ND <3	none detected

BPACC00671

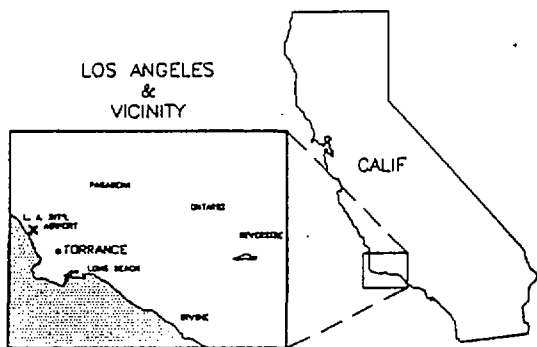
TABLE 2  
MEASURED GROUNDWATER ELEVATIONS

Well Casing	Casing Elevation (Assumed)	Groundwater Elevation January 16, 1992	Groundwater Elevation June 25, 1992	Change in Elevation
OW-1	100.86	34.86	35.41	-0.55
OW-2	99.63	34.93	35.23	-0.30
OW-3	98.56	34.84	35.24	-0.40
OW-4	99.19	34.73	35.13	-0.40
OW-5	97.99	34.65	35.06	-0.41
OW-6	99.67	34.69	35.07	-0.38

NOTE: Elevation in Feet



SOURCE: USGS 7.5 minute topo sheet, Torrance quad.



BPACC00673

0 2000 4000  
SCALE IN FEET

SITE LOCATION MAP  
AMOCO CHEMICAL FACILITY  
TORRANCE, CALIFORNIA

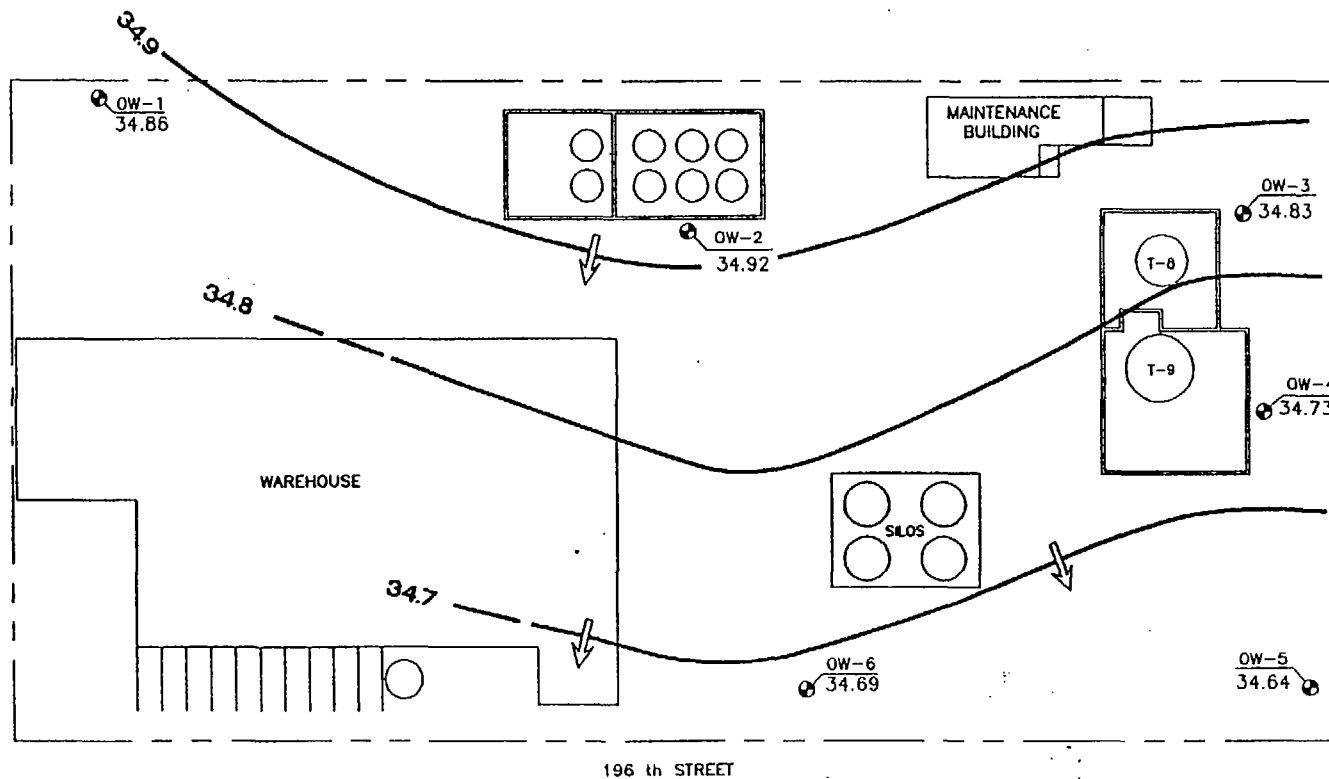
**SIMON HYDRO-SEARCH**  
5882 BOLSA AVENUE  
HUNTINGTON BEACH, CALIFORNIA 92649

PROJECT NO: 512-345

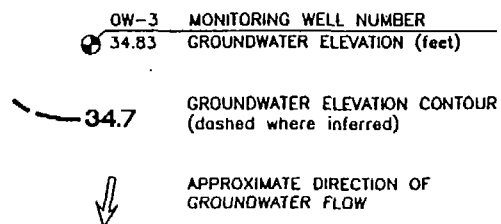
DATE: JANUARY, 1992

FIGURE NO:

1

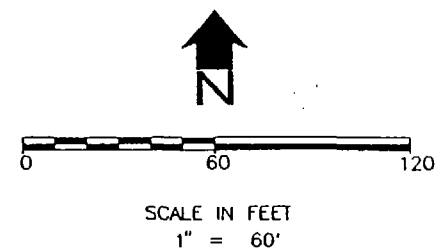


# EXPLANATION



## NOTE:

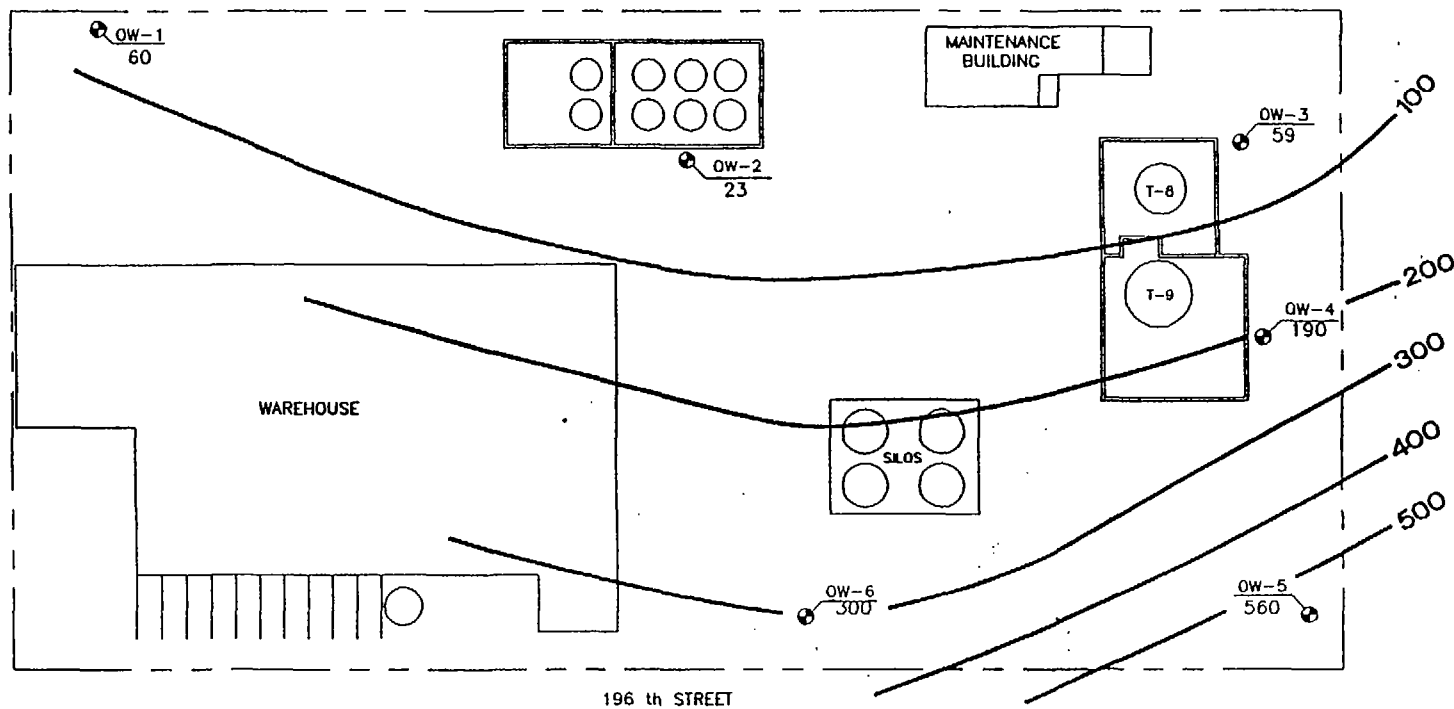
1. Data collected Jan. 16, 1992.
2. Contour interval = 0.10 feet.



GROUNDWATER ELEVATION CONTOUR MAP  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

<b>SIMON HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649	
PROJECT NO: 512-345	DWG NO: 345001
DATE: JANUARY, 1992	REV. 2/21/92
FIGURE: 2	

BPACC00674



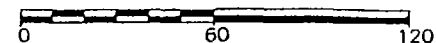
#### EXPLANATION

- OW-3 MONITORING WELL NUMBER  
 59 CIS-1,2 DICHLOROETHENE CONCENTRATION (ug/L)  
 500 CIS- 1,2 DICHLOROETHENE CONTOUR (Dashed where inferred)

NOTE: 1. Data collected Jan. 16, 1992  
 2. Contour Interval = 100(ug/l)



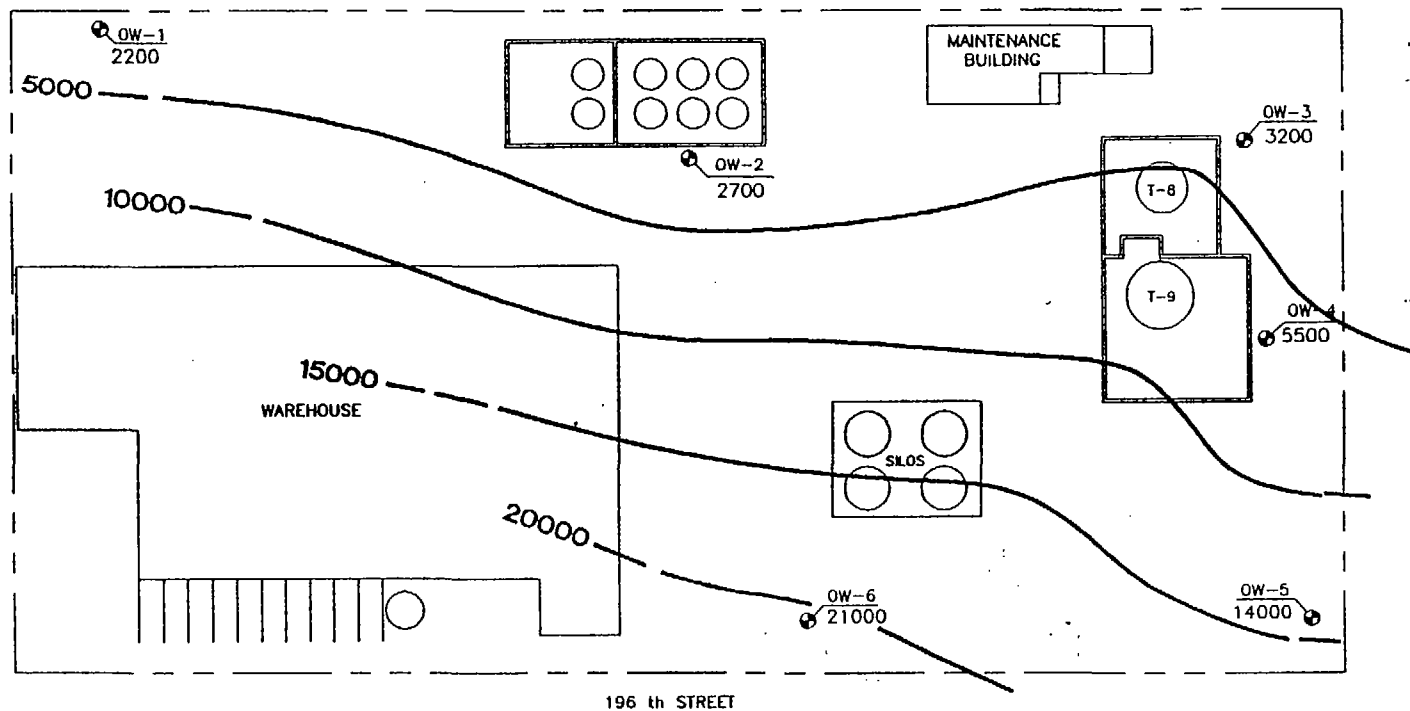
BPACC00675



SCALE IN FEET  
 1" = 60'

CIS - 1,2 DICHLOROETHENE  
 CONCENTRATION MAP  
 AMOCO CHEMICAL COMPANY  
 TORRANCE, CALIFORNIA

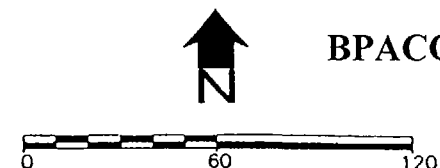
<b>SIMON HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649			
PROJECT NO:	512-345	DWG NO:	345001
DATE:	JANUARY 1992	REV:	2/21/92
			FIGURE: 3



# EXPLANATION

OW-3 MONITORING WELL NUMBER  
 1900 TRICHLOROETHENE CONCENTRATION (ug/L)  
 5000 TRICHLOROETHENE CONTOUR (Dashed where inferred)

1. Data collected Jan. 16, 1992.
2. Contour Interval = 5000 ug/L.

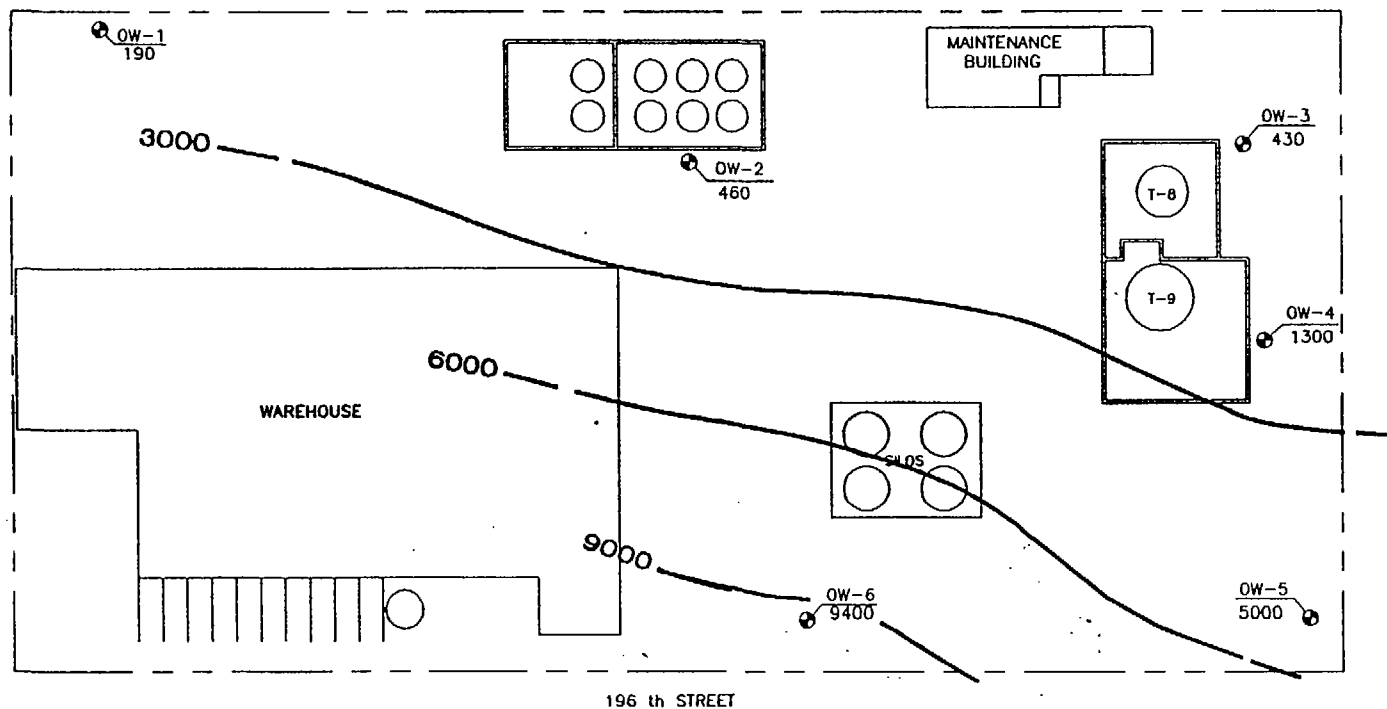


SCALE IN FEET  
 1" = 60'

BPACC00676

TRICHLOROETHENE CONCENTRATION MAP  
 AMOCO CHEMICAL COMPANY  
 TORRANCE, CALIFORNIA

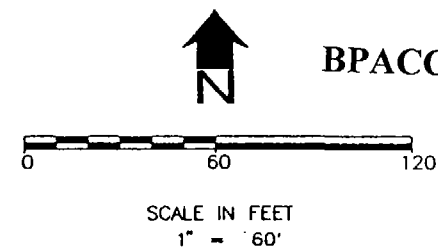
<b>SIMON HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649	
PROJECT NO: 512-345	DWG NO: 345001
DATE: JANUARY 1992	REV: 2/21/92
FIGURE: 4	



#### EXPLANATION


OW-3 MONITORING WELL NUMBER  
 430 TETRACHLOROETHYLENE CONCENTRATION (ug/L)  
 3000 TETRACHLOROETHYLENE CONTOUR (Dashed where inferred)

1. Data collected Jan. 16, 1992.
2. Contour interval = 3000 ug/L.

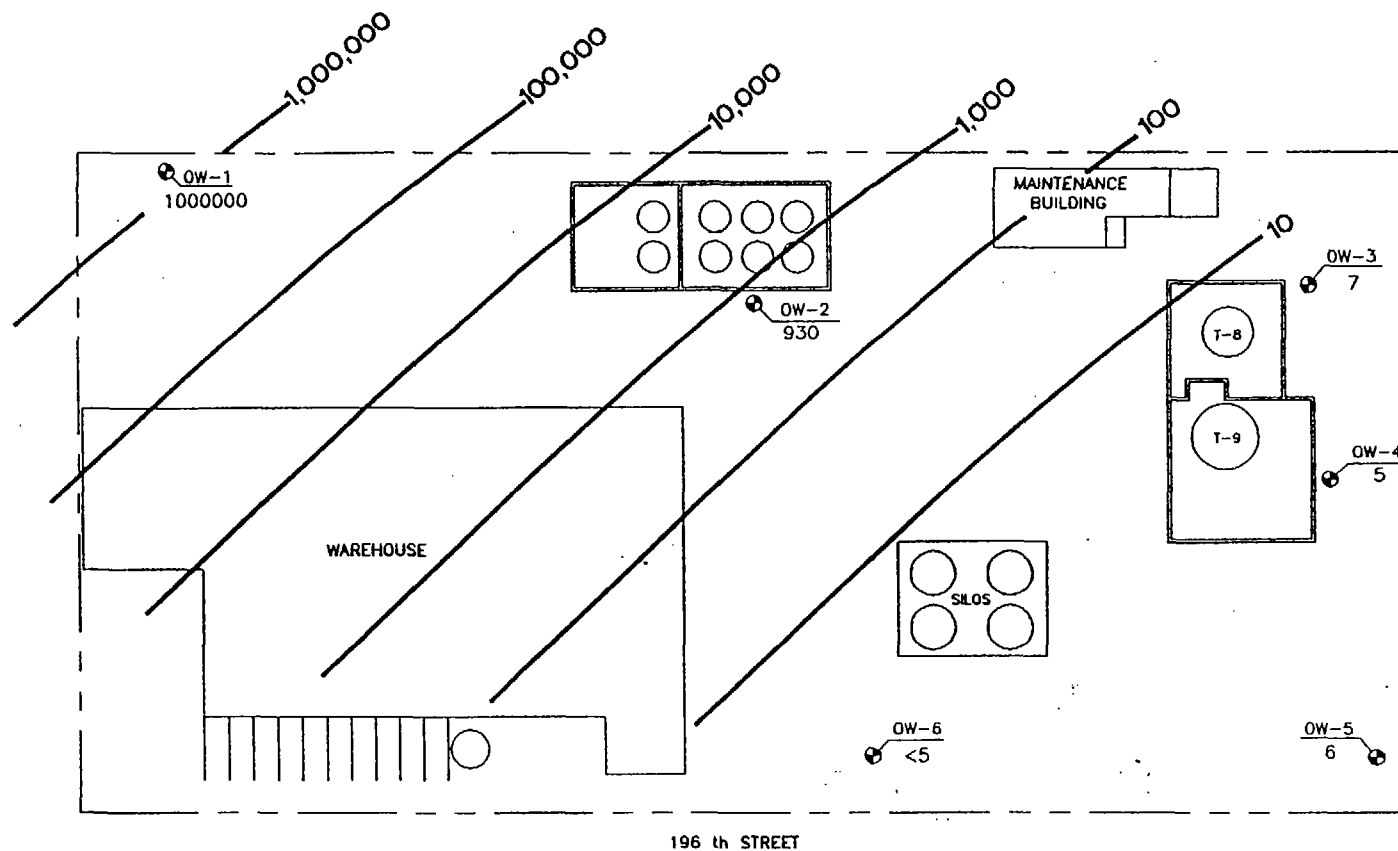


BPACC00677

TETRACHLOROETHENE CONCENTRATION MAP  
 AMOCO CHEMICAL COMPANY  
 TORRANCE, CALIFORNIA

 <b>simon HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649		
PROJECT NO:	512-345	DWG NO: 345001
DATE:	JANUARY, 1992	REV. 2/21/92
		FIGURE: 5





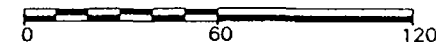
#### EXPLANATION

- OW-3 MONITORING WELL NUMBER  
 7 METHYLENE CHLORIDE  
 CONCENTRATION (ug/l)  
 10 METHYLENE CHLORIDE CONTOUR  
 (Dashed where inferred)

NOTE: 1. Data collected Jan 16, 1992.  
 2. <5 = not detected above limit shown.



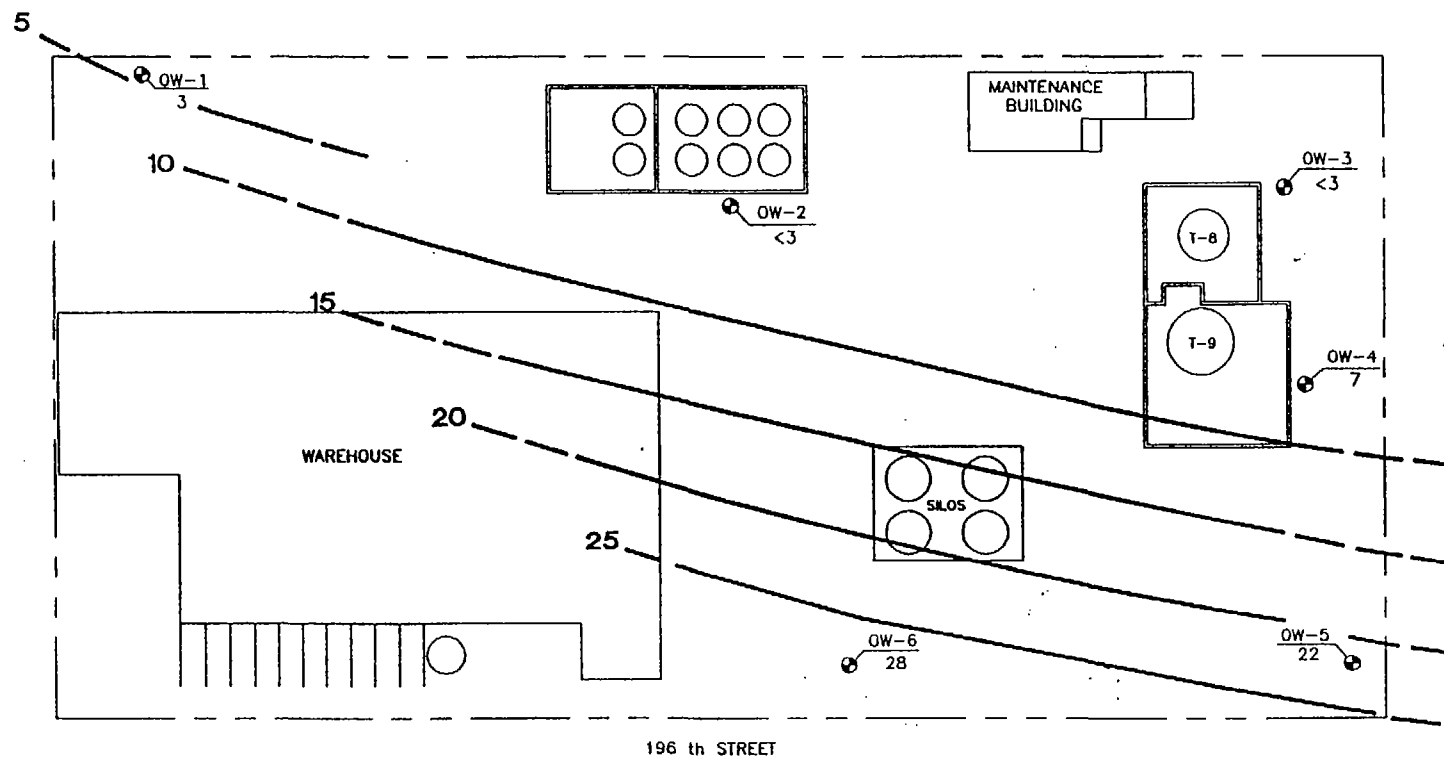
BPACC00678



SCALE IN FEET  
 1" = 60'

METHYLENE CHLORIDE CONCENTRATION MAP  
 AMOCO CHEMICAL COMPANY  
 TORRANCE, CALIFORNIA

<b>SIMON HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649					
PROJECT NO:	512-345	DWG NO:	345001	FIGURE:	6
DATE:	JANUARY 1992	REV:	2/21/92		



# EXPLANATION

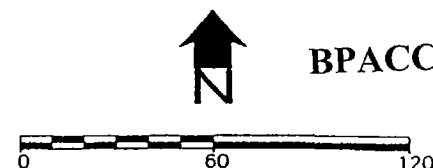
OW-3 MONITORING WELL NUMBER  
BENZENE CONCENTRATION (ug/l)

5 — BENZENE CONTOUR  
(Dashed where inferred)

NOTE: 1. Data collected Jan. 16, 1992.

2. Contour interval = 5 ug/l.

3. < 3 = not detected above limit shown.



SCALE IN FEET  
1" = 60'

BPACC00679

BENZENE CONCENTRATION MAP  
AMOCO CHEMICAL COMPANY  
TORRANCE, CALIFORNIA

<b>SIMON HYDRO-SEARCH</b> 5882 BOLSA AVENUE HUNTINGTON BEACH, CALIFORNIA 92649				
PROJECT NO:	512-345	DWG NO:	345001	FIGURE: 7
DATE:	JANUARY, 1992	REV.	2/21/92	

**APPENDIX A**

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS**

**BPACC00680**

THE EARTH TECHNOLOGY CORP.  
ANALYTICAL LABORATORIES  
5702 BOLSA AVENUE  
HUNTINGTON BEACH, CA 92649

Attn: Harvey Pierre  
Phone: (714) 892-2565

Simon Environmental Eng.  
5882 Bolsa Ave.  
Huntington Beach, Ca. 92649

Attn: Leo Chaidez  
Invoice Number:

Order #: 92-01-040  
Date: 01/21/92 08:32  
Work ID: TORRANCE/512-345  
Date Received: 01/16/92  
Date Completed: 01/21/92

SAMPLE IDENTIFICATION

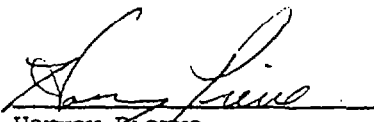
<u>Sample Number</u>	<u>Sample Description</u>	<u>Sample Number</u>	<u>Sample Description</u>
01	OW-01-01	02	OW-01-02
03	OW-02-03	04	OW-02-04
05	OW-100-05	06	OW-100-06
07	OW-03-07	08	OW-03-08
09	OW-04-09	10	OW-04-10
11	OW-05-11	12	OW-05-12
13	OW-06-13	14	OW-06-14
15	OW-00-15	16	OW-00-16

MULTIPLY THE DETECTION LIMIT BY THE DILUTION FACTOR.

ND = Indicates analyte not detected.

B = Indicates the analyte was observed in associated  
blank as well as the sample.

Approval:

  
Harvey Pierre  
Laboratory Manager

1/21/92  
Date

BPACC00681

Received: 01/16/92

## Results by Sample

SAMPLE ID OW-01-01FRACTION 01ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	ND	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	8.0	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	1000000	5.0	10000	01/18/92
Trans-1,2-Dichloroethene	ND	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	ND	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	60	3.0	1.0	01/17/92
Chloroform	37	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	3.0	3.0	1.0	01/17/92
Trichloroethene	2200	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	6.0	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	4.0	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	190	3.0	1.0	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	5.0	3.0	1.0	01/17/92
Xylene(total)	14	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00682

Page 2  
Received: 01/16/92

ETAL REPORT  
Results by Sample

Work Order # 92-01-040  
Continued From Above

SAMPLE ID OW-01-01 FRACTION 01A TEST CODE 624 NAME Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

ANALYST CL  
FILE ID \_\_\_\_\_ \*  
UNITS \_\_\_\_\_ ug/L  
BATCH\_ID VOA1-92-010  
COMMENTS \_\_\_\_\_ \* = >1V947; >1V956; >1V965

BPACC00683

Received: 01/16/92

Results by Sample

SAMPLE ID OW-01-02FRACTION 02ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

BPACC00684

Received: 01/16/92

ETAL

REPORT

Work Order # 92-01-040

Results by Sample

Continued From Above

SAMPLE ID OW-01-02 FRACTION 02A TEST CODE 625 NAME Semi-Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

Notes and Definitions for this Report:

EXTRACTED 01/17/92  
ANALYST TT  
FILE ID >AE755  
UNITS ug/L  
BATCH ID 625-76  
COMMENTS \_\_\_\_\_

BPACC00685



Received: 01/16/92

Results by Sample

SAMPLE ID OW-02-03FRACTION 03ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	17	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	ND	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	930	5.0	100	01/17/92
Trans-1,2-Dichloroethene	7.0	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	ND	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	23	3.0	1.0	01/17/92
Chloroform	11	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	ND	3.0	1.0	01/17/92
Trichloroethene	2700	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	460	3.0	100	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00686

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-02-03FRACTION 03ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

ANALYST CLFILE ID >1V948; >1V957UNITS ug/LBATCH\_ID VOA1-92-010

COMMENTS \_\_\_\_\_

BPACC00687

Page 7  
Received: 01/16/92

ETAL

REPORT  
Results by Sample

Work Order # 92-01-040

SAMPLE ID OW-02-04

FRACTION 04A

TEST CODE 625

NAME Semi-Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

BPACC00688

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-02-04

FRACTION 04A

TEST CODE 625

NAME Semi-Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

Notes and Definitions for this Report:

EXTRACTED 01/17/92

ANALYST TT

FILE ID >AE749

UNITS ug/L

BATCH\_ID 625-76

COMMENTS \_\_\_\_\_

BPACC00689

Received: 01/16/92

## Results by Sample

SAMPLE ID OW-100-05FRACTION 05ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	18	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	ND	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	25	5.0	1.0	01/17/92
Trans-1,2-Dichloroethene	8.0	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	ND	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	24	3.0	1.0	01/17/92
Chloroform	13	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	ND	3.0	1.0	01/17/92
Trichloroethene	2700	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	390	3.0	100	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00690

Page 10  
Received: 01/16/92

ETAL  
Results by Sample

Work Order # 92-01-040  
Continued From Above

SAMPLE ID OW-100-05 FRACTION 05A TEST CODE 624 NAME Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

ANALYST CL  
FILE ID >1V949; >1V958  
UNITS ug/L  
BATCH\_ID VOA1-92-010  
COMMENTS \_\_\_\_\_

BPACC00691

Received: 01/16/92

Results by Sample

SAMPLE ID OW-100-06FRACTION 06ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

BPACC00692

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-100-06FRACTION 06ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

Notes and Definitions for this Report:

EXTRACTED 01/17/92  
 ANALYST TT  
 FILE ID >AE750  
 UNITS ug/L  
 BATCH\_ID 625-76  
 COMMENTS \_\_\_\_\_

BPACC00693



Received: 01/16/92

Results by Sample

SAMPLE ID OW-03-07FRACTION 07ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	ND	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	8.0	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	7.0	5.0	1.0	01/17/92
Trans-1,2-Dichloroethene	ND	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	ND	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	59	3.0	1.0	01/17/92
Chloroform	8.0	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	ND	3.0	1.0	01/17/92
Trichloroethene	3200	3.0	1.0	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	430	3.0	1.0	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00694

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ETAL

REPORT

Work Order # 92-01-040

Results by Sample

Continued From Above

SAMPLE ID OW-03-07 FRACTION 07A TEST CODE 624 NAME Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

ANALYST CL  
FILE ID >1V950; >1V959  
UNITS ug/L  
BATCH\_ID VOA1-92-010  
COMMENTS \_\_\_\_\_

BPACC00695

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KTAL

REPORT

Work Order # 92-01-040

Results by Sample

SAMPLE ID OW-03-08

FRACTION ORA

TEST CODE 625

NAME Semi-Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

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Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-03-08FRACTION 08ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

## Notes and Definitions for this Report:

EXTRACTED 01/17/92ANALYST TTFILE ID >AE751UNITS ug/LBATCH ID 625-76

COMMENTS \_\_\_\_\_

BPACC00697

Received: 01/16/92

Results by Sample

MPLE ID OW-04-09

FRACTION 09A

TEST CODE 624

NAME Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	ND	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	33	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	5.0	5.0	1.0	01/17/92
Trans-1,2-Dichloroethene	ND	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	ND	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	190	3.0	1.0	01/17/92
Chloroform	19	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	7.0	3.0	1.0	01/17/92
Trichloroethene	5500	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	1300	3.0	100	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00698

Received: 01/16/92

RTAL

REPORT

Work Order # 92-01-040

Results by Sample

Continued From Above

SAMPLE ID OW-04-09 FRACTION 09A TEST CODE 624 NAME Volatiles in water  
 Date & Time Collected 01/16/92 Category \_\_\_\_\_  
 ANALYST CL  
 FILE ID >2B918; >1V951  
 UNITS ug/L  
 BATCH ID \*  
 COMMENTS \_\_\_\_\_ \* = VOA2-92-006; VOA1-92-010

Received: 01/16/92

Results by Sample

AMPLE ID OW-04-10 FRACTION 10A TEST CODE 625 NAME Semi-Volatiles in water  
 Date & Time Collected 01/16/92 Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-04-10FRACTION 10ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

## Notes and Definitions for this Report:

EXTRACTED 01/17/92ANALYST TTFILE ID >AE752UNITS ug/LBATCH ID 625-76

COMMENTS \_\_\_\_\_

BPACC00701



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Results by Sample

Work Order # 92-01-040

SAMPLE ID OW-05-11

FRACTION 11A TEST CODE 624  
Date & Time Collected 01/16/92

NAME Volatiles in water  
Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	14	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	150	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	6.0	5.0	1.0	01/17/92
Trans-1,2-Dichloroethene	ND	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	10	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	560	3.0	1.0	01/17/92
Chloroform	34	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	22	3.0	1.0	01/17/92
Trichloroethene	14000	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	5000	3.0	100	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00702

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RTAL

REPORT

Work Order # 92-01-040

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-05-11

FRACTION 11A

TEST CODE 624

NAME Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

ANALYST CL

FILE ID >1V952; >2B919

UNITS ug/L

BATCH ID \*

COMMENTS \_\_\_\_\_ \* = VOA1-92-010; VOA2-92-006

BPACC00703

Page 23  
Received: 01/16/92

RTAL  
Results by Sample

Work Order # 92-01-040

SAMPLE ID OW-05-12 FRACTION 12A TEST CODE 625 NAME Semi-Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl_methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

BPACC00704

Received: 01/16/92

ETAL

REPORT  
Results by SampleWork Order # 92-01-040  
Continued From AboveSAMPLE ID OW-05-12FRACTION 12ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

## Notes and Definitions for this Report:

EXTRACTED 01/17/92ANALYST TTFILE ID >AE756UNITS ug/LBATCH ID 625-76

COMMENTS \_\_\_\_\_

BPACC00705

ge 25  
Received: 01/16/92

ETAL REPORT  
Results by Sample

Work Order # 92-01-040

MPLE ID OW-06-13

FRACTION 13A

TEST CODE 624

NAME Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	1.0	01/17/92
Chloromethane	ND	10	1.0	01/17/92
Vinyl Chloride	ND	10	1.0	01/17/92
Bromomethane	ND	10	1.0	01/17/92
Chloroethane	ND	10	1.0	01/17/92
Trichlorofluoromethane	ND	10	1.0	01/17/92
Ethanol	ND	20	1.0	01/17/92
1,1-Dichloroethene	130	3.0	1.0	01/17/92
Acrolein	ND	10	1.0	01/17/92
Acetone	ND	20	1.0	01/17/92
Iodomethane	ND	10	1.0	01/17/92
Carbon Disulfide	ND	5.0	1.0	01/17/92
Methylene chloride	ND	5.0	1.0	01/17/92
Trans-1,2-Dichloroethene	ND	3.0	1.0	01/17/92
Acrylonitrile	ND	10	1.0	01/17/92
1,1-Dichloroethane	11	3.0	1.0	01/17/92
2-Butanone	ND	20	1.0	01/17/92
cis-1,2-Dichloroethene	300	3.0	1.0	01/17/92
Chloroform	69	3.0	1.0	01/17/92
1,2-Dichloroethane	ND	3.0	1.0	01/17/92
Vinyl Acetate	ND	20	1.0	01/17/92
1,1,1-Trichloroethane	ND	3.0	1.0	01/17/92
Carbon Tetrachloride	ND	3.0	1.0	01/17/92
Benzene	28	3.0	1.0	01/17/92
Trichloroethene	21000	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	1.0	01/17/92
Bromodichloromethane	ND	3.0	1.0	01/17/92
Dibromomethane	ND	10	1.0	01/17/92
2-Chloroethyl vinyl ether	ND	10	1.0	01/17/92
cis-1,3-Dichloropropene	ND	3.0	1.0	01/17/92
trans-1,3-Dichloropropene	ND	5.0	1.0	01/17/92
Ethyl methacrylate	ND	10	1.0	01/17/92
1,1,2-Trichloroethane	ND	5.0	1.0	01/17/92
Dibromochloromethane	ND	3.0	1.0	01/17/92
Bromoform	ND	5.0	1.0	01/17/92
4-Methyl-2-Pentanone	ND	20	1.0	01/17/92
Toluene	ND	3.0	1.0	01/17/92
2-Hexanone	ND	20	1.0	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	1.0	01/17/92
Tetrachloroethene	9400	3.0	100	01/17/92
Chlorobenzene	ND	3.0	1.0	01/17/92
Ethylbenzene	ND	3.0	1.0	01/17/92
Xylene(total)	ND	3.0	1.0	01/17/92
Styrene	ND	3.0	1.0	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92
1,2,3-Trichloropropane	ND	10	1.0	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	1.0	01/17/92

Notes and Definitions for this Report:

BPACC00706

age 26

ETAL

REPORT

Work Order # 92-01-040

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-06-13

FRACTION 13A

TEST CODE 624

NAME Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

ANALYST CL

FILE ID >2B920; >1V953

UNITS \_\_\_\_\_ ug/L

BATCH\_ID \_\_\_\_\_ \*

COMMENTS \_\_\_\_\_ \* = VOA2-92-006; VOA1-92-010

BPACC00707

Received: 01/16/92

Results by Sample

SAMPLE ID OW-06-14FRACTION 14ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	5.0	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

Received: 01/16/92

ETAL

REPORT

Results by Sample

Work Order # 92-01-040

Continued From Above

SAMPLE ID OW-06-14FRACTION 14ATEST CODE 625NAME Semi-Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

## Notes and Definitions for this Report:

EXTRACTED \_\_\_\_\_ 01/17/92

ANALYST TT

FILE ID \_\_\_\_\_ &gt;AE753

UNITS \_\_\_\_\_ ug/L

BATCH ID \_\_\_\_\_ 625-76

COMMENTS \_\_\_\_\_

BPACC00709



Received: 01/16/92

Results by Sample

SAMPLE ID OW-00-15FRACTION 15ATEST CODE 624NAME Volatiles in waterDate & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Dichlorodifluoromethane	ND	20	100	01/17/92
Chloromethane	ND	10	100	01/17/92
Vinyl Chloride	ND	10	100	01/17/92
Bromomethane	ND	10	100	01/17/92
Chloroethane	ND	10	100	01/17/92
Trichlorofluoromethane	ND	10	100	01/17/92
Ethanol	ND	20	100	01/17/92
1,1-Dichloroethene	ND	3.0	100	01/17/92
Acrolein	ND	10	100	01/17/92
Acetone	ND	20	100	01/17/92
Iodomethane	ND	10	100	01/17/92
Carbon Disulfide	ND	5.0	100	01/17/92
Methylene chloride	ND	5.0	100	01/17/92
Trans-1,2-Dichloroethene	ND	3.0	100	01/17/92
Acrylonitrile	ND	10	100	01/17/92
1,1-Dichloroethane	ND	3.0	100	01/17/92
2-Butanone	ND	20	100	01/17/92
cis-1,2-Dichloroethene	ND	3.0	100	01/17/92
Chloroform	ND	3.0	100	01/17/92
1,2-Dichloroethane	ND	3.0	100	01/17/92
Vinyl Acetate	ND	20	100	01/17/92
1,1,1-Trichloroethane	ND	3.0	100	01/17/92
Carbon Tetrachloride	ND	3.0	100	01/17/92
Benzene	ND	3.0	100	01/17/92
Trichloroethene	ND	3.0	100	01/17/92
1,2-Dichloropropane	ND	5.0	100	01/17/92
Bromodichloromethane	ND	3.0	100	01/17/92
Dibromomethane	ND	10	100	01/17/92
2-Chloroethyl vinyl ether	ND	10	100	01/17/92
cis-1,3-Dichloropropene	ND	3.0	100	01/17/92
trans-1,3-Dichloropropene	ND	5.0	100	01/17/92
Ethyl methacrylate	ND	10	100	01/17/92
1,1,2-Trichloroethane	ND	5.0	100	01/17/92
Dibromochloromethane	ND	3.0	100	01/17/92
Bromoform	ND	5.0	100	01/17/92
4-Methyl-2-Pentanone	ND	20	100	01/17/92
Toluene	ND	3.0	100	01/17/92
2-Hexanone	ND	20	100	01/17/92
1,1,2,2-Tetrachloroethane	ND	3.0	100	01/17/92
Tetrachloroethene	ND	3.0	100	01/17/92
Chlorobenzene	ND	3.0	100	01/17/92
Ethylbenzene	ND	3.0	100	01/17/92
Xylene (total)	ND	3.0	100	01/17/92
Styrene	ND	3.0	100	01/17/92
cis-1,4-Dichloro-2-Butene	ND	10	100	01/17/92
1,2,3-Trichloropropane	ND	10	100	01/17/92
trans-1,4-Dichloro-2-Butene	ND	10	100	01/17/92

Notes and Definitions for this Report:

BPACC00710

Received: 01/16/92

Results by Sample

Continued From Above

SAMPLE ID OW-00-15

FRACTION 15A

TEST CODE 624

NAME Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

ANALYST CL

FILE ID >2B921

UNITS ug/L

BATCH\_ID VOA-92-006

COMMENTS \_\_\_\_\_

pg 31  
Received: 01/16/92

RTAL  
Results by Sample

Work Order # 92-01-040

SAMPLE ID OW-00-16

FRACTION 16A

TEST CODE 625

NAME Semi-Volatiles in water

Date & Time Collected 01/16/92

Category \_\_\_\_\_

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
N-Nitrosodimethylamine	ND	10	1.0	01/18/92
2-Picoline	ND	50	1.0	01/18/92
Methyl methanesulfonate	ND	50	1.0	01/18/92
Ethyl methanesulfonate	ND	50	1.0	01/18/92
Phenol	ND	10	1.0	01/18/92
Aniline	ND	10	1.0	01/18/92
bis(2-chloroethyl) ether	ND	5.0	1.0	01/18/92
2-Chlorophenol	ND	10	1.0	01/18/92
1,3-Dichlorobenzene	ND	5.0	1.0	01/18/92
1,4-Dichlorobenzene	ND	5.0	1.0	01/18/92
Benzyl alcohol	ND	10	1.0	01/18/92
1,2-Dichlorobenzene	ND	5.0	1.0	01/18/92
2-Methylphenol	ND	10	1.0	01/18/92
bis(2chloroisopropyl)ether	ND	5.0	1.0	01/18/92
Acetophenone	ND	50	1.0	01/18/92
4-Methylphenol	ND	10	1.0	01/18/92
N-Nitroso-di-n-propylamine	ND	5.0	1.0	01/18/92
Hexachloroethane	ND	5.0	1.0	01/18/92
Nitrobenzene	ND	5.0	1.0	01/18/92
N-Nitrosopiperidine	ND	50	1.0	01/18/92
Isophorone	ND	5.0	1.0	01/18/92
2-Nitrophenol	ND	10	1.0	01/18/92
2,4-Dimethylphenol	ND	10	1.0	01/18/92
Benzoic acid	ND	50	1.0	01/18/92
bis(2-Chloroethoxy)methane	ND	10	1.0	01/18/92
a,a-Dimethylphenethylamine	ND	50	1.0	01/18/92
2,4-Dichlorophenol	ND	10	1.0	01/18/92
1,2,4-Trichlorobenzene	ND	5.0	1.0	01/18/92
Naphthalene	ND	5.0	1.0	01/18/92
2,6-Dichlorophenol	ND	50	1.0	01/18/92
4-Chloroaniline	ND	20	1.0	01/18/92
Hexachlorobutadiene	ND	5.0	1.0	01/18/92
N-Nitroso-di-n-butylamine	ND	50	1.0	01/18/92
4-Chloro-3-methylphenol	ND	10	1.0	01/18/92
2-Methylnaphthalene	ND	5.0	1.0	01/18/92
1,2,4,5-Tetrachlorobenzene	ND	50	1.0	01/18/92
Hexachlorocyclopentadiene	ND	5.0	1.0	01/18/92
2,4,6-Trichlorophenol	ND	10	1.0	01/18/92
2,4,5-Trichlorophenol	ND	10	1.0	01/18/92
2-Chloronaphthalene	ND	5.0	1.0	01/18/92
1-Chloronaphthalene	ND	50	1.0	01/18/92
2-Nitroaniline	ND	50	1.0	01/18/92
Dimethyl phthalate	ND	5.0	1.0	01/18/92
Acenaphthylene	ND	5.0	1.0	01/18/92
2,6-Dinitrotoluene	ND	5.0	1.0	01/18/92
3-Nitroaniline	ND	50	1.0	01/18/92
Acenaphthene	ND	5.0	1.0	01/18/92
2,4-Dinitrophenol	ND	50	1.0	01/18/92
4-Nitrophenol	ND	50	1.0	01/18/92
Dibenzofuran	ND	5.0	1.0	01/18/92

BPACC00712

pg 32  
Received: 01/16/92

ETAL REPORT  
Results by Sample

Work Order # 92-01-040  
Continued From Above

MPLE ID OW-00-16 FRACTION 16A TEST CODE 625 NAME Semi-Volatiles in water  
Date & Time Collected 01/16/92 Category \_\_\_\_\_

Pentachlorobenzene	ND	50	1.0	01/18/92
2,4-Dinitrotoluene	ND	5.0	1.0	01/18/92
1-Naphthylamine	ND	50	1.0	01/18/92
2-Naphthylamine	ND	50	1.0	01/18/92
2,3,4,6-Tetrachlorophenol	ND	50	1.0	01/18/92
Diethylphthalate	ND	5.0	1.0	01/18/92
4-Chlorophenyl-phenylether	ND	5.0	1.0	01/18/92
Fluorene	ND	5.0	1.0	01/18/92
4-Nitroaniline	ND	50	1.0	01/18/92
4,6-Dinitro-2-methylphenol	ND	50	1.0	01/18/92
Diphenylamine	ND	50	1.0	01/18/92
N-Nitrosodiphenylamine	ND	10	1.0	01/18/92
Azobenzene	ND	5.0	1.0	01/18/92
4-Bromophenyl-phenylether	ND	5.0	1.0	01/18/92
Phenacetin	ND	50	1.0	01/18/92
Hexachlorobenzene	ND	5.0	1.0	01/18/92
4-Aminobiphenyl	ND	50	1.0	01/18/92
Pentachlorophenol	ND	30	1.0	01/18/92
Pronamide	ND	50	1.0	01/18/92
Phenanthrene	ND	5.0	1.0	01/18/92
Anthracene	ND	5.0	1.0	01/18/92
Di-n-butylphthalate	ND	5.0	1.0	01/18/92
Fluoranthene	ND	5.0	1.0	01/18/92
Benzidine	ND	50	1.0	01/18/92
Pyrene	ND	5.0	1.0	01/18/92
p-Dimethylaminoazobenzene	ND	50	1.0	01/18/92
Butylbenzylphthalate	ND	5.0	1.0	01/18/92
3,3'-Dichlorobenzidine	ND	20	1.0	01/18/92
Benzo(a)anthracene	ND	5.0	1.0	01/18/92
Chrysene	ND	5.0	1.0	01/18/92
bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	01/18/92
Di-n-octyl phthalate	ND	5.0	1.0	01/18/92
7,12-Dimethylbenz(a)anthracene	ND	50	1.0	01/18/92
Benzo(b)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(k)fluoranthene	ND	5.0	1.0	01/18/92
Benzo(a)pyrene	ND	5.0	1.0	01/18/92
3-Methylcholanthrene	ND	50	1.0	01/18/92
Dibenz(a,j)acridine	ND	50	1.0	01/18/92
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	01/18/92
Dibenzo(a,h)anthracene	ND	5.0	1.0	01/18/92
Benzo(g,h,i)perylene	ND	5.0	1.0	01/18/92

Notes and Definitions for this Report:

EXTRACTED 01/17/92  
ANALYST TT  
FILE ID >AE754  
UNITS ug/L  
BATCH ID 625-76  
COMMENTS \_\_\_\_\_

BPACC00713

QC SUMMARY DATA SHEETS

BPACC00714

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

Lab Sample No.: 011792BLANK

Client Sample No.: 011792BLANK

Batch Number: VOA1-92-010

Client: ETAL

Data File: >1V946

Matrix: WATER

Sample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: CORA

Date Analyzed: 01/17/92

Dilution Factor: 1.00000

CONCENTRATION

UNITS:

ug/L

Q

CAS NO.

COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
75-71-8	Dichlorodifluoromethane	20.	U
74-87-3	Chloromethane	10.	U
75-01-4	Vinyl Chloride	10.	U
74-83-9	Bromomethane	10.	U
75-00-3	Chloroethane	10.	U
75-69-4	Trichlorofluoromethane	10.	U
64-17-5	Ethanol	20.	U
75-35-4	1,1-Dichloroethene	3.	U
107-02-8	Acrolein	10.	U
67-64-1	Acetone	20.	U
74-88-4	Iodomethane	10.	U
75-15-0	Carbon Disulfide	5.	U
75-09-2	Methylene Chloride	5.	U
156-60-5	trans-1,2-Dichloroethene	3.	U
107-13-1	Acrylonitrile	10.	U
75-34-3	1,1-Dichloroethane	3.	U
78-93-3	2-Butanone	20.	U
156-59-2	cis-1,2-Dichloroethene	3.	U
67-66-3	Chloroform	3.	U
107-06-2	1,2-Dichloroethane	3.	U
108-05-4	Vinyl Acetate	20.	U
71-55-6	1,1,1-Trichloroethane	3.	U
56-23-5	Carbon Tetrachloride	3.	U
71-43-2	Benzene	3.	U
79-01-6	Trichloroethene	3.	U
78-87-5	1,2-Dichloropropane	5.	U
75-27-4	Bromodichloromethane	3.	U
74-95-3	Dibromomethane	10.	U
110-75-8	2-Chloroethylvinyl ether	10.	U
10061-01-5	cis-1,3-Dichloropropene	3.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
97-63-2	Ethyl Methacrylate	10.	U
79-00-5	1,1,2-Trichloroethane	5.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

Lab Sample No.: 011792BLANK

Client Sample No.: 011792BLANK

Batch Number: VOA1-92-010

Client: ETAL

Data File: >1V946

Matrix: WATER

Sample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: CORA

Date Analyzed: 01/17/92

Dilution Factor: 1.00000

CONCENTRATION

UNITS:

ug/L

Q

CAS NO.

COMPOUND

124-48-1-----	Dibromochloromethane	3.	U
75-25-2-----	Bromoform	5.	U
108-10-1-----	4-Methyl-2-pentanone	20.	U
108-88-3-----	Toluene	3.	U
591-78-6-----	2-Hexanone	20.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	3.	U
127-18-4-----	Tetrachloroethene	3.	U
108-90-7-----	Chlorobenzene	3.	U
100-41-4-----	Ethylbenzene	3.	U
95-47-6-----	Xylene (total)	3.	U
100-42-5-----	Styrene	3.	U
1476-11-5-----	cis-1,4-Dichloro-2-Butene	10.	U
96-18-4-----	1,2,3-Trichloropropane	10.	U
110-57-6-----	trans-1,4-Dichloro-2-Butene	10.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

Page 2 of 2

BPACC00716

3A  
LABORATORY CONTROL WATER SAMPLE SPIKE/SPIKE DUPLICATE RECOVERY

Lab Name:=== ETAL ===

Lab Sample No.: 011792BLANK

Date Analyzed: 01/17/92

Batch Number: VOA1-92-010

Analyst: CORA

NCR Number:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0.00	43.00	86	61-145
Trichloroethene	50.00	0.00	46.00	92	71-120
Benzene	50.00	0.00	47.00	94	76-127
Toluene	50.00	0.00	49.00	97	76-125
Chlorobenzene	50.00	0.00	45.00	90	75-130

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50.00	39.00	78	9	14	61-145
Trichloroethene	50.00	49.00	98	6	14	71-120
Benzene	50.00	47.00	94	0	11	76-127
Toluene	50.00	53.00	106	8	13	76-125
Chlorobenzene	50.00	47.00	93	3	13	75-130

\* Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:



2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name:=== ETAL ===

Date Analyzed: 1/17/92

Batch Number: VOA1-92-010

Analyst: CORA

NCR Number:

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	011792BLAN	109	105	97		0
02	LCS	100	103	95		0
03	01-040-01A	90	113	37 *		1
04	01-040-03A	102	99	82		0
05	01-040-05A	108	105	91		0
06	01-040-07A	103	103	92		0
07	01-040-09A	100	102	90		0
08	01-040-11A	108	111	97		0
09	01-040-13A	107	109	94		0
10	LCSD	105	110	107		0
11	01-040-01A	102	101	100	1:100	0
12	01-040-03A	107	105	104	1:100	0
13	01-040-05A	109	104	106	1:100	0
14	01-040-07A	104	103	100	1:100	0
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QC LIMITS

S1 (TOL) = Toluene-d8 (88-110)  
 S2 (BFB) = Bromofluorobenzene (86-115)  
 S3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

Lab Sample No.: 011892BLANK

Client Sample No.: 011892BLANK

Batch Number: VOA1-92-011

Client: ETAL

Data File: >1V964

Matrix: WATER

Sample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: THIZAR

Date Analyzed: 01/18/92

Dilution Factor: 1.00000

CONCENTRATION  
UNITS:  
ug/L

CAS NO.	COMPOUND	ug/L	Q
75-71-8	Dichlorodifluoromethane	20.	U
74-87-3	Chloromethane	10.	U
75-01-4	Vinyl Chloride	10.	U
74-83-9	Bromomethane	10.	U
75-00-3	Chloroethane	10.	U
75-69-4	Trichlorofluoromethane	10.	U
64-17-5	Ethanol	20.	U
75-35-4	1,1-Dichloroethene	3.	U
107-02-8	Acrolein	10.	U
67-64-1	Acetone	20.	U
74-88-4	Iodomethane	10.	U
75-15-0	Carbon Disulfide	5.	U
75-09-2	Methylene Chloride	7.	@
156-60-5	trans-1,2-Dichloroethene	3.	U
107-13-1	Acrylonitrile	10.	U
75-34-3	1,1-Dichloroethane	3.	U
78-93-3	2-Butanone	20.	U
156-59-2	cis-1,2-Dichloroethene	3.	U
67-66-3	Chloroform	3.	U
107-06-2	1,2-Dichloroethane	3.	U
108-05-4	Vinyl Acetate	20.	U
71-55-6	1,1,1-Trichloroethane	3.	U
56-23-5	Carbon Tetrachloride	3.	U
71-43-2	Benzene	3.	U
79-01-6	Trichloroethene	3.	U
78-87-5	1,2-Dichloropropane	5.	U
75-27-4	Bromodichloromethane	3.	U
74-95-3	Dibromomethane	10.	U
110-75-8	2-Chloroethylvinyl ether	10.	U
10061-01-5	cis-1,3-Dichloropropene	3.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
97-63-2	Ethyl Methacrylate	10.	U
79-00-5	1,1,2-Trichloroethane	5.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

ab Sample No.: 011892BLANK

Client Sample No.: 011892BLANK

Batch Number: VOA1-92-011

Client: ETAL

ata File: >1V964

Matrix: WATER

ample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: THIZAR

Date Analyzed: 01/18/92

ilution Factor: 1.00000

CONCENTRATION

UNITS:

ug/L

Q

CAS NO.

COMPOUND

124-48-1-----	Dibromochloromethane	3.	U
75-25-2-----	Bromoform	5.	U
108-10-1-----	4-Methyl-2-pentanone	20.	U
108-88-3-----	Toluene	3.	U
591-78-6-----	2-Hexanone	20.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	3.	U
127-18-4-----	Tetrachloroethene	3.	U
108-90-7-----	Chlorobenzene	3.	U
100-41-4-----	Ethylbenzene	3.	U
95-47-6-----	Xylene (total)	3.	U
100-42-5-----	Styrene	3.	U
1476-11-5-----	cis-1,4-Dichloro-2-Butene	10.	U
96-18-4-----	1,2,3-Trichloropropane	10.	U
110-57-6-----	trans-1,4-Dichloro-2-Butene	10.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

Page 2 of 2

BPACC00720

## LABORATORY CONTROL WATER SAMPLE SPIKE AND SPIKE DUPLICATE RECOVERY

Lab Name:=== ETAL ===

Lab Sample No.: 011892BLANK

Date Analyzed: 1/18/92

Batch Number: VOA1-92-011

Analyst: CORA

NCR Number:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0.00	39.00	78	61-145
Trichloroethene	50.00	0.00	52.00	103	71-120
Benzene	50.00	0.00	53.00	105	76-127
Toluene	50.00	0.00	57.00	113	76-125
Chlorobenzene	50.00	0.00	51.00	101	75-130

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	50.00	40.00	79	1	14 61-145
Trichloroethene	50.00	47.00	94	9	14 71-120
Benzene	50.00	52.00	104	0	11 76-127
Toluene	50.00	56.00	112	0	13 76-125
Chlorobenzene	50.00	50.00	99	2	13 75-130

# Column to be used to flag recovery and RPD values with an asterisk

Values outside of qc limits

PD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

COMMENTS:

2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name:=== ETAL ===

Date Analyzed: 01/18/92

Batch Number: VOA1-92-011

Analyst: THIZAR

NCR Number:

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	011892BLAN	104	104	94		0
02	LCS	106	103	92		0
03	LCSD	97	94	96		0
04	01-040-01A	99	100	97	10,000	0
05	01-040-15A	106	103	85	1:50	0
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QC LIMITS

S1 (TOL) = Toluene-d8 (88-110)  
 S2 (BFB) = Bromofluorobenzene (86-115)  
 S3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

Lab Sample No.: 011892BLANK

Client Sample No.: 011892BLANK

Batch Number: VOA2-92-006

Client: ETAL

Data File: >2B910

Matrix: WATER

Sample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: CORA

Date Analyzed: 01/17/92

Dilution Factor: 1.00000

CONCENTRATION

UNITS:

CAS NO.

COMPOUND

ug/L

Q

75-71-8-----	Dichlorodifluoromethane	20.	U
74-87-3-----	Chloromethane	10.	U
75-01-4-----	Vinyl Chloride	10.	U
74-83-9-----	Bromomethane	10.	U
75-00-3-----	Chloroethane	10.	U
75-69-4-----	Trichlorofluoromethane	10.	U
64-17-5-----	Ethanol	20.	U
75-35-4-----	1,1-Dichloroethene	3.	U
107-02-8-----	Acrolein	10.	U
67-64-1-----	Acetone	20.	U
74-88-4-----	Iodomethane	10.	U
75-15-0-----	Carbon Disulfide	5.	U
75-09-2-----	Methylene Chloride	5.	U
156-60-5-----	trans-1,2-Dichloroethene	3.	U
107-13-1-----	Acrylonitrile	10.	U
75-34-3-----	1,1-Dichloroethane	3.	U
78-93-3-----	2-Butanone	20.	U
156-59-2-----	cis-1,2-Dichloroethene	3.	U
67-66-3-----	Chloroform	3.	U
107-06-2-----	1,2-Dichloroethane	3.	U
108-05-4-----	Vinyl Acetate	20.	U
71-55-6-----	1,1,1-Trichloroethane	3.	U
56-23-5-----	Carbon Tetrachloride	3.	U
71-43-2-----	Benzene	3.	U
79-01-6-----	Trichloroethene	3.	U
78-87-5-----	1,2-Dichloropropane	5.	U
75-27-4-----	Bromodichloromethane	3.	U
74-95-3-----	Dibromomethane	10.	U
110-75-8-----	2-Chloroethylvinyl ether	10.	U
10061-01-5-----	cis-1,3-Dichloropropene	3.	U
10061-02-6-----	trans-1,3-Dichloropropene	5.	U
97-63-2-----	Ethyl Methacrylate	10.	U
79-00-5-----	1,1,2-Trichloroethane	5.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
EPA METHOD 8240

Lab Sample No.: 011892BLANK

Client Sample No.: 011892BLANK

Batch Number: VOA2-92-006

Client: ETAL

Data File: >2B910

Matrix: WATER

Sample wt/vol: 5.0 mL

Date Received: 00/00/00

Analyst: CORA

Date Analyzed: 01/17/92

Dilution Factor: 1.00000

CONCENTRATION

UNITS:

ug/L

Q

CAS NO.

COMPOUND

124-48-1-----	Dibromochloromethane	3.	U
75-25-2-----	Bromoform	5.	U
108-10-1-----	4-Methyl-2-pentanone	20.	U
108-88-3-----	Toluene	3.	U
591-78-6-----	2-Hexanone	20.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	3.	U
127-18-4-----	Tetrachloroethene	3.	U
108-90-7-----	Chlorobenzene	3.	U
100-41-4-----	Ethylbenzene	3.	U
95-47-6-----	Xylene (total)	3.	U
100-42-5-----	Styrene	3.	U
1476-11-5-----	cis-1,4-Dichloro-2-Butene	10.	U
96-18-4-----	1,2,3-Trichloropropane	10.	U
110-57-6-----	trans-1,4-Dichloro-2-Butene	10.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

Page 2 of 2

BPACC00724

## LABORATORY CONTROL WATER SAMPLE SPIKE/SPIKE DUPLICATE RECOVERY

Lab Name:=== ETAL ===

Lab Sample No.: 011892BLANK

Date Analyzed: 01/17/92

Batch Number: VOA2-92-006

Analyst: CORA

NCR Number:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0.00	41.00	82	61-145
Trichloroethene	50.00	0.00	48.00	95	71-120
Benzene	50.00	0.00	47.00	94	76-127
Toluene	50.00	0.00	47.00	94	76-125
Chlorobenzene	50.00	0.00	48.00	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	50.00	44.00	88	7	14	61-145
Trichloroethene	50.00	46.00	91	4	14	71-120
Benzene	50.00	44.00	87	7	11	76-127
Toluene	50.00	45.00	90	4	13	76-125
Chlorobenzene	50.00	46.00	92	4	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

Values outside of qc limits

RPD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

COMMENTS:



2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name:=== ETAL ===

Date Analyzed: 1/17/92

Batch Number: VOA2-92-006

Analyst: CORA

NCR Number:

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	011892BLAN	96	87	106		0
02	LCS	99	89	103		0
03	LCSD	100	89	108		0
04	01-040-09A	99	89	113	1:100	0
05	01-040-11A	97	86	111	1:100	0
06	01-040-13A	96	87	112	1:100	0
07	01-040-15A	96	89	110	1:100	0
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QC LIMITS

S1 (TOL) = Toluene-d8 (88-110)  
 S2 (BFB) = Bromofluorobenzene (86-115)  
 S3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

Lab Sample No.: 01040-LMB

Client Sample No.: CONTROL SAMPLE

Batch Number: 625-76

Client: SIMON-EEI

Data File: 18L748

Matrix: WATER

Sample wt/vol: 1000 mL

Date Received: 01/16/91

Dilution Factor: 1.0

Date Extracted: 01/17/92

Analyst: TH12HK

Date Analyzed: 01/18/92

## CONCENTRATION

UNITS:

ug/L

U

Lab No.	COMPOUND	ug/L	U
62-75-9-----	N-Nitrosodimethylamine_____	10.	U
109-06-8-----	2-Picoline_____	50.	U
66-27-3-----	Methyl methanesulfonate_____	50.	U
62-50-0-----	Ethyl methanesulfonate_____	50.	U
108-95-2-----	Phenol_____	10.	U
62-55-3-----	Aniline_____	10.	U
111-44-4-----	bis(2-Chloroethyl)Ether_____	5.	U
95-57-8-----	2-Chlorophenol_____	10.	U
541-73-1-----	1,3-Dichlorobenzene_____	5.	U
106-46-7-----	1,4-Dichlorobenzene_____	5.	U
100-51-6-----	Benzyl alcohol_____	10.	U
95-50-1-----	1,2-Dichlorobenzene_____	5.	U
95-48-7-----	2-Methylphenol_____	10.	U
39658-52-9-----	bis(2-chloroisopropyl)ether_____	5.	U
98-86-2-----	Acetophenone_____	50.	U
106-44-5-----	4-Methylphenol_____	10.	U
621-64-7-----	N-Nitroso-Di-n-propylamine_____	5.	U
67-72-1-----	Hexachloroethane_____	5.	U
98-95-3-----	Nitrobenzene_____	5.	U
100-75-4-----	N-Nitrosopiperidine_____	50.	U
78-59-1-----	isophorone_____	5.	U
88-75-5-----	2-Nitrophenol_____	10.	U
105-67-9-----	2,4-Dimethylphenol_____	10.	U
65-85-0-----	Benzoic acid_____	50.	U
111-91-1-----	bis(2-Chloroethoxy)methane_____	10.	U
122-09-8-----	a,a-Dimethylphenethylamine_____	50.	U
120-85-2-----	2,4-Dichlorophenol_____	10.	U
120-82-1-----	1,2,4-Trichlorobenzene_____	5.	U
91-20-3-----	Naphthalene_____	5.	U
87-65-0-----	2,6-Dichlorophenol_____	50.	U
106-47-8-----	4-Chloroaniline_____	20.	U
87-68-3-----	Hexachlorobutadiene_____	5.	U
924-16-3-----	N-Nitroso-di-n-butylamine_____	50.	U
59-50-7-----	4-Chloro-3-methylphenol_____	10.	U
91-57-6-----	2-Methylnaphthalene_____	5.	U
95-94-3-----	1,2,4,5-Tetrachlorobenzene_____	50.	U
77-47-4-----	Hexachlorocyclopentadiene_____	5.	U
88-06-2-----	2,4,6-Trichlorophenol_____	10.	U

U = Compound undetected at the listed practical quantitation limit.

@ = Compound was found in sample. B = Compound was found in blank.

Lab Sample No.: 01040-LNB

Client Sample No.: CONTROL SAMPLE

Batch Number: 625-76

Client: SIMON-EEI

Data File: ZHE748

Matrix: WATER

Sample wt/vol: 1000 mL

Date Received: 01/16/91

Dilution Factor: 1.0

Date Extracted: 01/17/92

Analyst: TH12HR

Date Analyzed: 01/18/92

## CONCENTRATION

UNITS:

ug/L

U

LMS NO.	COMPOUND		
95-95-4-----	2,4,5-Trichlorophenol	10.	U
91-58-7-----	2-Chloronaphthalene	5.	U
90-13-1-----	1-Chloronaphthalene	50.	U
88-74-4-----	2-Nitroaniline	50.	U
131-11-3-----	Dimethylphthalate	5.	U
208-96-8-----	Acenaphthylene	5.	U
606-20-2-----	2,6-Dinitrotoluene	5.	U
99-09-2-----	3-Nitroaniline	50.	U
83-32-9-----	Acenaphthene	5.	U
51-28-5-----	2,4-Dinitrophenol	50.	U
100-02-7-----	4-Nitrophenol	50.	U
132-64-9-----	Dibenzofuran	5.	U
608-93-5-----	Pentachlorobenzene	50.	U
121-14-2-----	2,4-Dinitrotoluene	5.	U
134-32-7-----	1-Naphthylamine	50.	U
91-59-8-----	2-Naphthylamine	50.	U
58-90-2-----	2,3,4,6-Tetrachlorophenol	50.	U
84-66-2-----	Diethylphthalate	5.	U
7005-72-3-----	4-Chlorophenyl-phenylether	5.	U
86-73-7-----	Fluorene	5.	U
100-01-6-----	4-Nitroaniline	50.	U
534-52-1-----	4,6-Dinitro-2-methylphenol	50.	U
122-39-4-----	Diphenylamine	50.	U
86-30-6-----	N-Nitrosodiphenylamine	10.	U
105-35-3-----	Azobenzene	5.	U
101-55-3-----	4-Bromophenyl-phenylether	5.	U
62-44-2-----	Phenacetin	50.	U
118-74-1-----	Hexachlorobenzene	5.	U
92-67-1-----	4-Aminobiphenyl	50.	U
87-86-5-----	Pentachlorophenol	30.	U
23950-58-5-----	Pronamide	50.	U
85-01-8-----	Phenanthrene	5.	U
120-12-7-----	Anthracene	5.	U
84-74-2-----	Di-n-butylphthalate	5.	U
206-44-0-----	Fluoranthene	5.	U
92-87-5-----	Benzidine	50.	U
129-00-0-----	Pyrene	5.	U
60-11-7-----	p-Dimethylaminoazobenzene	50.	U

U = Compound undetected at the listed practical quantitation limit.  
 @ = Compound was found in sample. B = Compound was found in blank.

Lab Sample No.: 01040-LNB

Client Sample No.: CONTROL SAMPLE

Batch Number: 625-75

Client: SIMON-EEI

Data File: 2AE748

Matrix: WATER

Sample wt/vol: 1000 mL

Date Received: 01/16/91

Dilution Factor: 1.0

Date Extracted: 01/17/92

Analyst: THIZAR

Date Analyzed: 01/18/92

## CONCENTRATION

UNITS:

ug/L

U

LNS NO.	COMPOUND	ug/L	U
85-68-7-----	Butylbenzolphthalate_____	5.	U
91-94-1-----	3,5-Dichlorobenzidine_____	20.	U
56-55-3-----	Benzo(a)anthracene_____	5.	U
218-01-9-----	Chrysene_____	5.	U
117-81-7-----	bis(2-Ethylhexyl)phthalate____	5.	U
117-84-0-----	Di-n-octylphthalate_____	5.	U
57-97-6-----	7,12-Dimethylbenz(a)anthrac_	50.	U
205-99-2-----	benzo(b)fluoranthene_____	5.	U
207-08-9-----	Benzo(k)fluoranthene_____	5.	U
50-32-8-----	Benzo(a)pyrene_____	5.	U
56-49-5-----	3-Methylcholanthrene_____	50.	U
224-42-0-----	Dibenz(a,j)acridine_____	50.	U
193-59-5-----	Indeno(1,2,3-cd)pyrene_____	5.	U
53-70-3-----	Dibenz(a,h)anthracene_____	5.	U
191-24-2-----	Benzo(g,h,i)perylene_____	5.	U

U = Compound undetected at the listed practical quantitation limit.

Ø = Compound was found in sample. B = Compound was found in blank.

Lab Name: ETAL

Lab Sample No. 01040-LMB

Date Analyzed: 01/18/92

Batch Number: 625-76

Analyst: THIZAR

NCR Number:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC.
Phenol	100.00	0.00	33.00	32	12-110
2-Chlorophenol	100.00	0.00	71.00	71	27-123
1,4-Dichlorobenzene	50.00	0.00	38.00	75	36- 97
N-Nitroso-di-n-prop. (1)	50.00	0.00	50.00	99	41-116
1,2,4-Trichlorobenzene	50.00	0.00	32.00	64	39- 98
4-Chloro-3-methylphenol	100.00	0.00	60.00	59	23- 97
Acenaphthene	50.00	0.00	40.00	80	46-118
4-Nitrophenol	100.00	0.00	25.00	24	10- 80
2,4-Dinitrotoluene	50.00	0.00	40.00	79	24- 96
Pentachlorophenol	100.00	0.00	49.00	49	9-103
Pyrene	50.00	0.00	41.00	82	26-127

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD   REC.
Phenol	100.00	29.00	28	13	42   12-110
2-Chlorophenol	100.00	54.00	53	29	40   27-123
1,4-Dichlorobenzene	50.00	29.00	57	27	28   36- 97
N-Nitroso-di-n-prop. (1)	50.00	38.00	76	26	38   41-116
1,2,4-Trichlorobenzene	50.00	30.00	59	8	28   39- 98
4-Chloro-3-methylphenol	100.00	62.00	62	4	42   23- 97
Acenaphthene	50.00	41.00	81	1	31   46-118
4-Nitrophenol	100.00	26.00	26	8	50   10- 80
2,4-Dinitrotoluene	50.00	35.00	69	13	38   24- 96
Pentachlorophenol	100.00	51.00	50	2	50   9-103
Pyrene	50.00	34.00	68	18	31   26-127

(1) N-Nitroso-di-n-propylamine

# Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of qc limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

COMMENTS:

Lab Name: ETAL

Date Analyzed: 1/18/92

Batch Number: 625-76

Analyst: THIZAR

NCR Number:

	EPA	S1	S2	S3	S4	S5	S6	OTHER	TOT
	SAMPLE NO.	(NBZ)#	(FBP)#	(TPH)#	(PHL)#	(ZFP)#	(TBP)#		OUT
	=====	=====	=====	=====	=====	=====	=====	=====	=====
01	01040-LMB	65	90	76	38	48	82		0
02	01040-LCS	67	94	84	39	52	80		0
03	01040-LCSD	68	81	75	30	40	67		0
04	01040-04H	76	102	80	44	52	78		0
05	01040-06H	61	90	79	45	51	81		0
06	01040-08H	66	90	73	47	56	81		0
07	01040-10H	59	91	67	41	48	78		0
08	01040-14H	62	75	70	42	49	89		0
09	01040-16H	57	79	77	37	45	80		0
10	01040-02A	1 *	93	72	23	6 *	18		2
11	01040-12A	58	80	57	38	45	76		0
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# QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (35-114)  
 S2 (FBP) = 2-Fluorobiphenyl (43-116)  
 S3 (TPH) = Terphenyl-d14 (33-141)  
 S4 (PHL) = Phenol-d5 (10-110)  
 S5 (ZFP) = 2-Fluorophenol (21-110)  
 S6 (TBP) = 2,4,6-Tribromophenol (10-123)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 D Surrogates diluted out

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

01.040

**SIMON-EEI**

Project Name/No. 512-345

Project Location TORRANCE

Samplers' Name GALVIN F. LEE

Signature Galvin F. Lee

Laboratory

## ANALYSIS REQUESTED

SIMON - EEI

714-891-7446

SAMPLE ID	DATE	TIME	SAMPLE LOCATION, MEDIA, TYPE, DESCRIPTION
-----------	------	------	---

OW-01-01 1-16-92 1250

OW-01-02 1250

OW-02-03 1402

OW-02-04 1402

OW-100-05 1410

OW-100-06 1410

OW-03-07 1519

OW-03-08 1519

OW-04-09 1510

OW-04-10 1510

OW-05-11 1615

OW-05-12 1615

OW-06-13 1625

OW-06-14 1625

OW-00-15 1-16-92 1620

624

625

Number of Containers

Remarks

SEND ANALYSES TO: LEO CHAIDEZ

AT ADDRESS LISTED ABOVE

BPACC00732

Total Number of Containers:

Relinquished by:

Date/Time

Received by:

Relinquished by:

Date/Time

Received by:

Relinquished by:

Date/Time

Received by:

Relinquished by:

Date/Time

Received for Lab by:

Method of Shipment to Laboratory:

Agent

Person Shipping:

Distribution: Laboratory should sign and return WHITE COPY with analyses. YELLOW, sampler retains.

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

01.040

# SIMON-EEI

Project Name/No. 512-345  
 Project Location TORRANCE  
 Samplers' Name CALVIN F. LEE  
 Signature [Signature]  
 Laboratory

## ANALYSIS REQUESTED

SIMON - EEI

714-891-7446

SAMPLE ID	DATE	TIME	SAMPLE LOCATION, MEDIA, TYPE, DESCRIPTION
-----------	------	------	---

625

Number of Containers

Remarks

W-00-16	1-16-92	1620	
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X

1

SEND ANALYSES TO: LEO CHAIDEZ  
 AT ADDRESS LISTED ABOVE

Total Number of Containers:

Relinquished by: [Signature] Date/Time 1-16-92 1745

Received by: Relinquished by: Date/Time Received by: GARY WILSON

Relinquished by: Date/Time Received by: Relinquished by: Date/Time Received for Lab by: [Signature] 1-16-92

Method of Shipment to Laboratory:

Agent

Person Shipping:

Distribution: Laboratory should sign and return WHITE COPY with analyses. YELLOW, sampler retains.

BPACC00733



**APPENDIX B**  
**GROUNDWATER MONITORING WELL SAMPLING PROTOCOL**

**BPACC00734**

## APPENDIX B

### MONITORING WELL SAMPLING PROTOCOL

Sampling was conducted using disposable polyethylene bailers having controlled flow emptying devices. Samples were collected in clean 40-milliliter glass vials having lids with Teflon lined septa and containing hydrochloric acid as a preservative.

Subsequent to collection, each vial was visually checked to ensure no air was entrapped within the vial. A sample label was then affixed to each vial and contained the following information: date, job number, well number, sample number, collectors initials and requested analysis. A custody seal was placed across each container lid to ensure sample integrity prior to analysis. Sealed and labeled sample containers were placed immediately into an ice chest containing blue ice for transport to the analytical laboratory at the end of the field day. Chain-of-custody forms were completed in the field and accompanied the samples to the analytical laboratory.